SURGICAL OBSERVATIONS:

BEING A

Quarterly Report

OF

CASES IN SURGERY;

TREATED

IN THE MIDDLESEX HOSPITAL,

IN THE CANCER ESTABLISHMENT,

AND

IN PRIVATE PRACTICE.

EMBRACING

AN ACCOUNT OF THE ANATOMICAL AND PATHOLOGICAL RESEARCHES

IN THE

SCHOOL OF WINDMILL STREET.

BY

CHARLES BELL.

VOL. II.

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Preface.

THE first Volume of these Reports has been received with that good temper which the Author has so uniformly experienced; and he hopes he may interpret this into an approval of his design. It has been one object with him to show how superior in usefulness (and he had almost said in interest) a statement of the facts in ordinary practice can be made, when compared with the account of unusual and monstrous things. The Profession has seen that it has been his object to give authentic cases, published while yet the eyes of the inquisitive were on the subjects of them; and they must have perceived that he was not so ambitious of addressing the great body of the Profession, as to mix with the younger members, to understand their difficulties, to combat their mistakes and prejudices, and, in short, by devoting much of his attention to their interests and improvement, to establish a fair claim to the approbation of the older members.

He is prepared to take the rubs which he meets with, as mere accidental collisions. The Profession he considers, as it were an element with certain bodies immersed in it, of which some rise and others sink: and it is much a matter of curiosity to observe the vortices by which they are moved, by what little air-bubbles some are raised to the surface, and with what alacrity others settle to the bottom.

Taking the matter in this light, he is not disposed to resent either studied neglect or the severity of criticism: they are alike attended with an effort and anxiety that may be considered complimentary to the person who is the object of them.

The best pledge that in these Observations the Author has entertained no animosities, is the openness with which he has explained his practice; for he believes it will be admitted that no one would willingly have ventured on the very free communications which he has made here, under the consciousness of having by injustice to others deserved the severity of criticism.

To some journalists he has to make acknowledgments, not for favour shown to him, but for being true to their professions of impartiality. To

critics of another order it is not necessary that he should make any answer. If he shall ever be put upon his defence, he will not attempt to combat phantoms without name or substance; but will claim an equality with their masters, and call the magicians themselves into the circle. He is sensible, however, that nothing short of the interests of humanity can authorize such discussions.

He has not spoken of some of his friends with all the warmth which he feels towards them: the reason is, that the traffic in praise, which once was carried on with some show of modesty, has now become so bold and barefaced a measure of convention, or mutual understanding, that he thinks he had no authority to bring his friends in, to share the shame of it.

34, *Soho Square*,
21 *March*, 1818.

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EXPLANATION

OF THE

PLATES.

PLATE I.

THE Bladder and Urethra of a Man who died from Bursting of the Urethra and Effusion of Urine into the Scrotum.

A. The Penis in Outline.

B. The Neck of the Bladder and Urethra laid open. The Letter points to the *Caput Gallinaginis.* Pins hold out the Membrane of the Urethra, and exhibit how dilatable it has become behind an old Stricture.

C. The Cavity of the Bladder in Outline. The Bladder had been distended; its inner Coat was loaded with Blood.

D. Membrane of the Urethra behind the Stricture.

E. Urethra anterior to the Stricture.

F. The Stricture, a firm and condensed Substance.

G. The Scrotum.

H. The Integuments of the Perineum held out by a Chain Hook.

I. A Probe passed from the Opening in the Perineum, through the irregular Cavities formed by Ulceration.

K. The Part of the Urethra which, ulcerating behind the Stricture F, discharged the Urine into the Cellular Membrane, and caused all the Mischief.

This Plate illustrates the Propriety of cutting into the dilated Urethra, behind the Stricture, in some Cases.

PLATE II.

This is a very rude Scheme, to show what is meant by the *line of Axis through the Pelvis.*

The Skeleton and Pelvis are sketched, as seen laterally.

A. The Sacrum.

B. The Os Pubis.

C. A Line drawn from the Umbilicus perpendicular to the Brim of the Pelvis.

D. The Line carried through the Pelvis, equidistant from the Bones, and necessarily therefore a Curve.

E. The Line prolonged in a Direction perpendicular, to the Outlet of the Pelvis.

This Figure illustrates the Course of the Child's Head through the Pelvis, and also the Form and the Application of Surgical Instruments.

PLATE III.

These are Outlines, intended to show the Effect of the revolving of the Pelvis on the Heads of the Thigh Bones, in altering the Position of the Bladder.

FIG. 1. After showing the Section of the Male Pelvis at Lecture, I had the Body supported, and took this Sketch.

A. B. The Os Pubis divided near the Synchondrosis Pubis.

C. The Bladder leaning upon the Os Pubis.

D. The Prostate Gland.

E. The Vesiculæ Seminales.

F. The Penis.

G. The Catheter.

H. I. A Line representing the Inclination of the Os Pubis, forward. This is the Position of the Os Pubis, when a Patient stands as if leaning against the Wall, to have the Catheter introduced; and the Outline G, shows how much the Catheter must be depressed, that its Point may enter into the Cavity of the Bladder.

FIG. 2. This Outline was taken when the same Subject was supine, and the Hand tied to the Sole of the Foot, as in the Position for Lithotomy.

A. B. The Os Pubis.

C. The Bladder fallen back a little from the Bone.

D. The Prostate Gland.

E. The Vesiculæ Seminales.

F. The Spongy Body of the Urethra.

G. The Catheter in the same Position in respect to its Entrance into the Bladder, but very different from G, Fig. 1.

H. I. A Line drawn to show the Os Pubis thrown back, and cutting the Line K. L. [which indicates the Position of the Bone in the former Position] at right Angles.

PLATE IV.

FIG. 1. The Sac of a congenital Hernia.

A. The Testicle.

B. The Epididymis.

C. The Tunica Vaginalis, being here the Sac of the Hernia.

D. The Neck of the Sac.

E. A Bristle carried through a Cord or ligamentous Fibre, which strangulated the Intestine, and which was cut in the Operation.

F. Part of the Abdominal Muscles.

FIG. 2. The Sac of a Hernia seen upon that Surface which it presents to the Abdomen.

A. The Peritoneal Sac. We look into the Cavity through the Mouth or Opening.

B. Firm Ligamentous Bands formed at the Mouth of the Sac, the Consequence of long Compression.

C. Other Bands forming a dense Ring round the Orifice, and capable of strangulating the Intestine, and cutting into its Coats.

PLATE V.

[This Plate illustrates a Dissertation which I intend to present

in my next Number—A Surgical Essay on the Anatomy of the Parts concerned in the lateral Operation for the Stone, by Dr. Gairdner. I shall do this both in Consideration of the intrinsic Value of the Essay, and as an Example to our Hospital and Dissecting-Room Pupils, to show them how creditably they may be employed for themselves, and how much they add to our general Stock of Knowledge by cultivating the Opportunities which are held out to them.]

From a wish to represent all the Parts as distinctly as possible, some of them may appear a little more defined than what is natural; but so far as I can judge, the Delineation is faithful, and without any exaggeration.

A. Is the cut Edgeof the Os Pubis of the left Side, the Section being made a little to one Side of the Symphysis, in the Manner mentioned in the Essay.

B. The Bulb of the Urethra.

C. Cellular Substance, somewhat condensed, lying on the Surface of the Bladder, and forming what has been termed the Fascia Vesicalis.

D. The Vesicula Seminalis on the left Side, which lies external to the Fascia Vesicalis.

E. The anterior Edge of the Bladder in Outline.

F. The triangular Ligament of the Ossa Pubis, or Ligament of the Bulb of the Urethra. The Edge which extends from the Hook to the Os Pubis, was attached to the Ramus Pubis of the left Side, before the Section was made.

G. One of the Glands of Cowper.

H. The Compressor Urethræ of the left Side.

I. The Fascia which invests the Extremity of the Rectum.

K. The Fibres of the Levator Ani Muscle, which were attached to the left Os Pubis, passing under the Fascia of the Rectum.

L. The Fascia which surrounds the Prostate Gland, and whic afterwards covers the inside of the Levator Ani, and Obturator Internus.

O. The cut End of the left Corpus Cavernosum, separated from the left Crus Penis.

Plate I.

Etched by J. Stewart.

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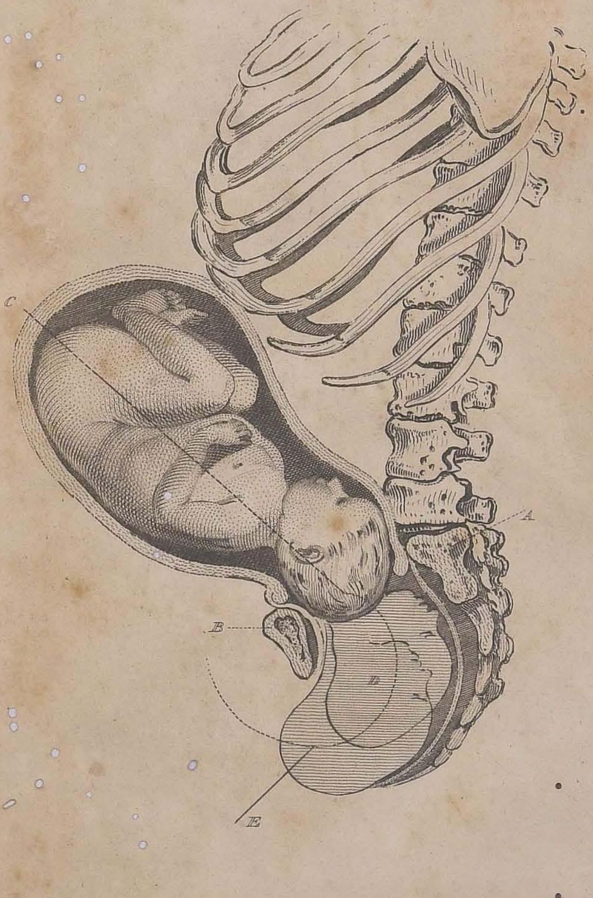
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A
B
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Fig. 1.

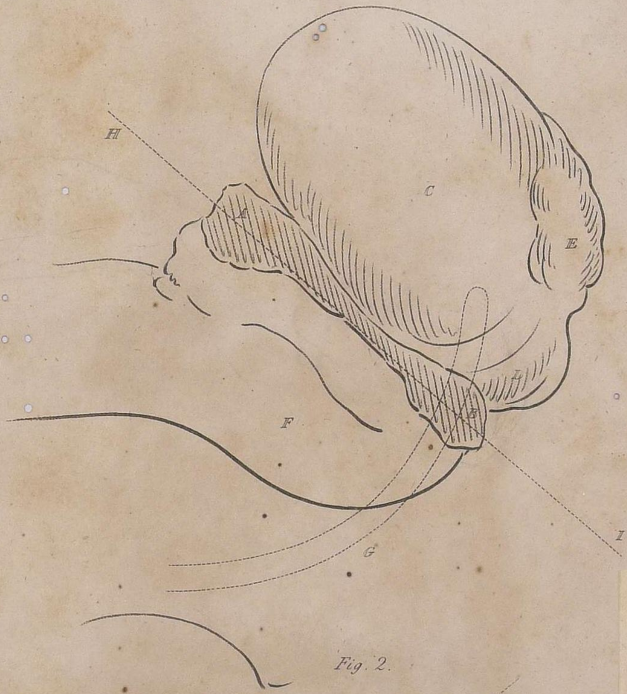

Fig. 2.

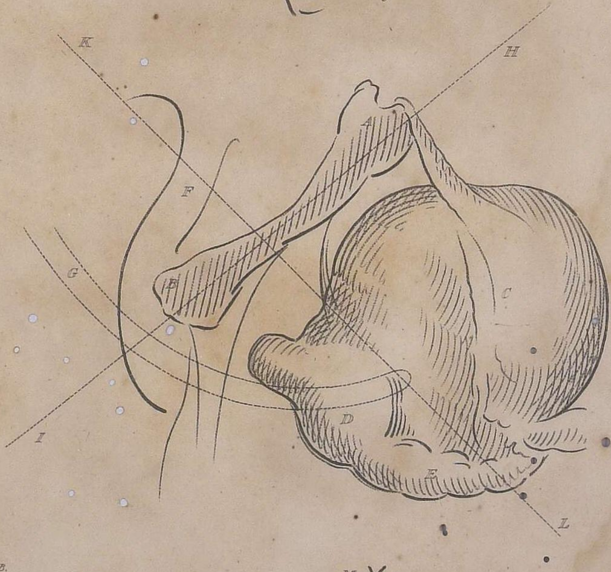

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Fig. 1.

Fig. 2.

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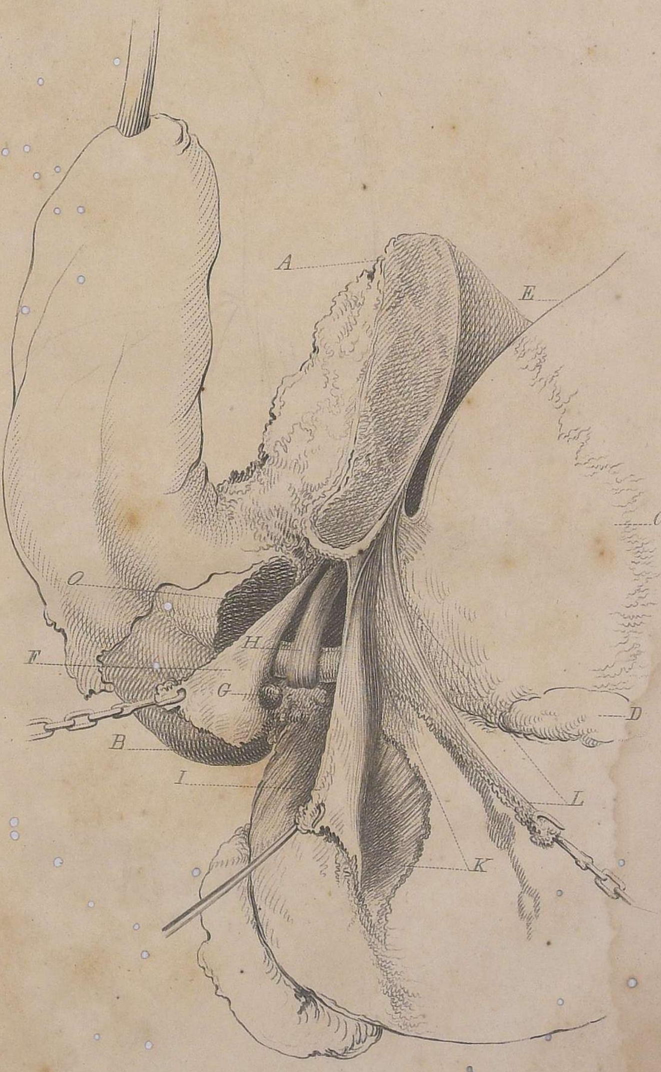

Drawn by H. Mayo. Engr.d by J. Stewart.

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Surgical Observations,

&c. &c.

REPORT,

BEING THE SUBSTANCE OF CLINICAL REMARKS DELIVERED IN THE HOSPITAL, IN WHICH THE FORMIDABLE NATURE OF THE SYPHILITIC ULCER IS DESCRIBED. TO WHICH IS NOW ADDED, SOME OBSERVATIONS ON LATE CHANGES IN THE PRACTICE OF THE BRITISH ARMY.

JUST about the time when a safe rule of practice in the treatment of the venereal disease had been established among judicious surgeons—when the experiments and theories of Mr. Hunter had served to give a more correct idea of syphilis, and a simple mode of practice: certain opinions came into fashion, which have increased in extravagance from day to day, and have been attended with the very worst consequences. The question has all at once assumed unusual importance, in consequence of some gentlemen of authority in the army, outstripping their brethren in the civil

department, and having somewhat suddenly, (on the ground-work of these dangerous opinions), commenced practice on that extended scale, which the peculiarity of their situation puts within their power.

It is impossible to see so large and valuable a part of the community exposed to hazards, greater than the worst perils of the field, without feeling much anxiety. Dear as the health and welfare of soldiers must be, to those, who have not only accompanied them in the honours and splendour of victory, but have watched over them amidst the miseries of the hospital, the surgeons of the army must not imagine, that we of the civil department do not hold the interests of our soldiers as near our hearts. The army is a part of the people, withdrawn for a time and then returned to their homes; as they are now returning in crowds, which sensibly augment the numbers even of the cities, as well as every village and hamlet in the land. The surgeons, too, who have accompanied them, are now restored to their friends, to carry into practice at home, the methods on which they have, in the course of their public employment, been taught to rely; and it does, indeed, become a momentous question, whether they have not been misled into opinions, fraught with dangers of the most appalling kind. To the examination of this question I shall apply myself with the eagerness and attention which belong to so important an occasion.

Not only has an opinion prevailed that new diseases have arisen, bearing a resemblance to pox in every thing, but the severity of symptoms; but a notion has been received, and is very current among our young practitioners, that syphilis itself has become a different disease from what it was originally; that it is dying out like the old stock of apples! Another opinion, still more outrageously against the evidence of our senses, and fraught with peril, is, that syphilis is not a formidable disease, unless when combined with the pernicious influence of mercury upon the constitution. And in confirmation of this, it is somewhat too confidently asked, who ever saw the formidable effects of syphilis, when mercury had not been administered in some period of the disease*?

Of that opinion (which I have stated to have

* These doctrines are not referred to any precise authority, but every one knows, that they take their origin in certain opinions of Mr. Hunter, or from certain suggestions in his Treatise on the Venereal Disease. Looking to that work, and the overstrained eulogy of the author's opinions, it is impossible not to ascribe in some degree to this source, those opinions and that practice which I feel myself called upon to say, is dangerous. It is much to be lamented, that there is too often a disposition to admire, in the great men who have gone before us, some unsubstantial theory or opinion thrown out casually, rather than those solid and better parts of their professional exertions, for which the world stands indebted to them. I know that I am accused of wanting due deference for the opinions of Mr. Hunter. If it were so, it would be a lesser offence than

been pretty generally expressed) that the secondary symptoms of syphilis appear only in these cases

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theirs, who bestow upon him indiscriminate praise, concealing from the younger part of the profession how apt his expressions are to mislead them on practical subjects. In reference to the present subject, it cannot be denied, and ought not to be kept concealed, that, with all its merits, Mr. Hunter's Treatise on the Venereal Disease is no guide for practice; and yet, young men learning that it is a book justly esteemed, and that Mr. Hunter was the first surgeon of his day, they naturally think, that they have got in that volume a treasure of sound doctrine and safe practice.

To give Mr. Hunter the full measure of his praise (that praise which one, not a party to professional controversy, would desire to see bestowed) would include the eulogy of the elder brother also. They were, indeed, *par nobile fratrum*, from whose exertions improvements of the highest consequence found their way into all the departments of the profession. But the better parts of Mr. Hunter's character, as well as the discoveries, the judgment, and the good taste of Dr. Hunter, have been thrown quite into the back ground, and we hear incessant talk about certain opinions of Mr. Hunter, rather than of his great labour, his contributions to science, and his attention to facts. To a character thus depreciated, and a portrait thus injured and almost defaced, we may find some puny resemblances. Something slovenly in manner, something startling and odd in opinion, with little occasional crude hypotheses, obscurely expressed, have been thought to make a resemblance to him, whose whole life was devoted to investigation, whose passion was the improvement of science.

When one sees the education of the younger part of the profession at present, and when we witness the habits of thinking, it is impossible to avoid regretting, that the elder brother should not have had a biographer with the same zeal and com-

where mercury has been given, I have no difficulty in affirming that it can be entertained only by those who have seen little of this disease; and I confess my surprise and sorrow that essays founded on this assumption should be permitted to go abroad with any portion of approbation. I have lately perused three essays, in all of which the authors seem to think that they have made great strides to an improved practice. I wish that they may not be found in this race to have shewn more eagerness than discretion. It is very remarkable that in these essays (where some five hundred cases are brought forward) there is not to be found one that is well authenticated by accuracy of description. There is not any where in these essays to be found the description of the matter at issue, a *Venereal Sore*. Now, the misfortune is, that hundreds and thousands of cases brought from the practice of the army in support of opinions, must

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prehension of his subject which distinguished the writer of Mr. Hunter's life. Had as true a representation been given of the learning and taste of Dr. Hunter, and of the true genius he displayed—as illustrated by the state in which he found and in which he left us—of his gentleman-like manners, his address, and his happy eloquence, had he been represented as the man who redeemed us from a state of semi-barbarism in the matter of anatomy and physiology, and raised us to some consideration in Europe, the profession would have found a higher standard of imitation, and have been more advanced in what is essential, as well as in what is becoming.

necessarily produce a sort of revolution in the mind. A man cannot help feeling staggered in his most established opinions, by a body of evidence apparently so overwhelming; but when we return to the contemplation of two or three well-marked cases, some obstinate facts, standing like landmarks to guide us, we return to the dictates of sober sense, and to the long experience on which our safe practice has been grounded.

My business is to guard my pupils from forming too hasty an opinion, and to give them such precautions as may enable them to enter upon practice with some fairer hope of success than these essays are likely to afford, and of avoiding the disappointments which the authors of them are preparing for themselves, and the misery of which they are laying the foundations.

I shall here transcribe from my note-book, the description of a *Venereal Sore* on the penis, the groin, the face, and the throat. This I conceive to be necessary, in order to call the attention of my readers strictly to the subject and question at issue. How our army surgeons have not happened to see, or seeing have not chosen to describe the venereal ulcer, I am unable to comprehend, unless we are to believe that they have found themselves among patients whose condition resembled the state of the inmates of our female venereal ward. I find it often necessary to say to our pupils, You have not to look there for cases. The poor creatures are so habituated to contamination, so repeat-

edly infected, and have had so much mercury before they came here, and are so much disposed to prevaricate, that there is no drawing from them a history of symptoms; nor can we easily distinguish what belongs to the disease, or what to the remedy.

True venereal ulcer unchecked by the use of mercury, is a thing so distinct; so frightful in its progress to the destruction of the part affected; and in the end so fatal to the patient's life, that it is impossible to witness it and abstain from the only remedy that can arrest it. In saying that we are to lay the patient upon his back, and apply soothing anodyne lotions, and to continue this trifling when there is a deep and spreading venereal sore, is, in my opinion, to show that they deceive themselves, or that they have forgot the thing! It is to the circumstance that mercury is so truly a specific for this disease, as to divest it of its greatest terrors even when improperly used, that we are to attribute the return of this question once more, notwithstanding all the written evidence we have, and our daily experience on the subject*.

* I should often refer to Mr. Pearson's work, were not his expressions in anticipation of the present state of practice, and his menace so strongly expressed and so applicable, that I might be thought to have been looking for words more cutting than I could invent: but I have so little of this disposition, that the dislike of expressing a different opinion from my ingenious friend Mr. Rose, has made me again and again inclined to lay aside these papers, until by some mistake of a pupil, evi-

VENEREAL ULCER ON THE PENIS.

First Report.—The penis is very much mutilated in consequence of former chancres; there is a sore seated on the ruins of the old one; it extends from the glans to the scrotum, along the lower part of the penis, and has destroyed the urethra. This patient has taken no mercury.

Second Report.—The ulcer is making progress, notwithstanding that I have put him on a course of mercury.

Third Report.—It is worse; for though stationary below, and perhaps less foul, it is eating deep by the side of the glans. Is this sore truly venereal, or is it phagedenic? is it to be cured by pushing the mercurial course, or by a sudden and entire change of measures? I have preferred the first, because the sore is ragged on its edges, and irregular in the bottom; because the secretion within the sore is of a greenish yellow, in some places black and slimy, and fixed to the bottom of the sore (like the slime which is attached to the bottom of running water), and the granulations project through

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dently influenced by his opinions, or on some expression of high approbation by older persons, of that which I am convinced is pregnant with mischief, I am again convinced of the necessity of offering a decided opinion on the matter.

the foul bottom of the sore; because the granulations have on their points small specks of extravasated blood, which on the morrow fade and waste away. The mercury being pushed to salivation, the sore became clean, and in due time healed.

VENEREAL ULCERATION OF THE GROIN.—SECOND EXAMPLE.

A gentleman in the army received the infection at Malta, and travelled across Italy and France without taking mercury. This is the transcript of the note descriptive of his sore: "There is in the groin an ulcer of the size of my hand; the longest diameter across the upper part of the thigh. It is deep, and very irregular at bottom. There stand up from the bottom, red portions of the size of the uvula, and betwixt these there are chops and chasms of tremendous depth, considering the place of the artery. The edge of the sore is irregular, angular, and ragged; towards the ilium it is of a dark red, the skin thin and undermined. Towards the pubes the edge is semicircular and abrupt, covered with a foul viscid secretion, through which granulations appear obscurely. The outer edge of this margin of the sore is covered with a crust of dark red secretion, which is concreted, and is like dried blood. The progress of the ulceration is by the fading of the granulations. At night you see a spot of extravasated blood, and in the morning, the prominence of that granulation is dull in colour and shrunk, and next day it has disappeared altogether.

As soon as the mercury darkened the gums, we saw no further progress of the sore, nor wasting of the granulations. The surrounding inflammation disappeared; the edge became clean and suppurated kindly, and day after day contracted, and finally closed.

THIRD EXAMPLE.—ON THE NOSE AND LIP.

The ulcer which has destroyed the septum nasi, has made progress upon the upper lip. The nose is entirely excavated, and the integuments are much swollen. The lip and the nose are separated. The lip is separated from the alveoli, and the nose and mouth communicate before the teeth. The upper lip is very tumid and inflamed; it exhibits a broad foul ulcer where it is separated from the nose, and a viscid dirty yellow slime covers it. There is a dark line, as if formed by concreted bloody matter on the very edge, which if plucked off or loosened by poultice, would exhibit a raw sharp ragged edge. The hideous appearance and her fears, present a picture of misery. This has been a woman remarkable on the town; but she affirms, that for years she has not been in danger of infection. I say, notwithstanding, this is venereal. A fortnight after this a mercurial course was begun, after soothing applications, and all those lesser remedies which are called attention to the general health, had proved to be unequal to

the cure. Under mercury the sores healed rapidly, but the woman's face was sadly disfigured.

FOURTH EXAMPLE.—ULCER ON THE FACE.

The ulcer is narrow, deep, and foul, but the depth is more relative to the edge of the sore than to the surface of the cheek; for the edge is elevated into a ridge, which is surmounted with a red line, sharp, and minutely notched. The centre of the sore is lined with a yellowish green matter that cannot be wiped out. The ulcer is extending down the cheek, while by the aid of escharotics, there is a disposition to close in the upper part. The direction in which the ulcer is to extend is declared by a minute speck of a bluish colour on the edge of the sore.

This ulcer, after resisting a great variety of dressings, changed its character, as soon as the mercury made the mouth sore; the elevated ridge subsided, the sharp edge was rounded, the foul secretion could be wiped off the inner surface; granulations appeared; and the skin was drawn in and healed.

FIFTH EXAMPLE.—IN THE THROAT.

When I look into this man's throat, I find the soft palate in a great part destroyed, and the edge is left irregular, and covered with a snotty viscid secretion, which cannot be washed off, and yet

appears as if it might. Around the edge of the ulcer, and spreading on the roof of the mouth, there is a blush of dark inflammation, without tumefaction, in strong contrast of colour with the foulness within. The ulcer is excavated, irregular, and lined with an ash-coloured slough; it appears as if the substance were dug out, leaving a determined edge.———Venereal Ward, 7th Aug.*

The mercury has affected the gums; the sore is already clean and diminished in extent.—Aug. 17.

What is meant by saying that the disease has lost its violence I am at a loss to conceive, unless it is, that we become day by day more capable of throwing off the unpleasant impressions which continue to haunt the younger imagination. Is not the following description like the picture of the disease in the sixteenth century? I do not vouch for this being the pure effects of syphilis, nor dare to say how much belongs to improper treatment of the disease.

* About this time a singular case occurred. A man about forty-five years of age was sent up to the Venereal Ward from the Physicians' Ward, where he had been considered as rheumatic. It was a complicated case; for besides foulness of skin, and nodes and pains in the bones, he had a deep ulcer in the throat. Soon after he was brought up, he became paralytic, and three days after, died apoplectic. On the examination of his body, the ulcer in the throat was seen to communicate through the basilar process of the occipital bone, with an ulcer of the medulla oblongata; and this ulcer having made progress upwards, had opened the basilar artery.

LAST EXAMPLE.

The nose has been destroyed by ulceration, and the ulcer is still active on the cheek. The lips are separated from the alveoli; they are enormously swollen, and hang loose. Within the cavities of the face, the bones are carious, and there flows from them a very fœtid discharge, excoriating. The eyelids and eyebrows have lost their hair. The margin of the eyelids are tumid and ulcerated; the hair of the head has fallen off, and a garland of inflamed tubercles encircles the forehead. The cornea is dull; the hearing also is much affected. This gentleman still clings to existence; and hopes yet to enjoy life, when he shall have retired to his estates in the pleasantest county of England.

Were it my purpose merely to exhibit the horrors of the disease, and these horrors increased by the uncertainty which sometimes attends it, I should narrate the whole case of J. Whitbread, who, after eleven years, (and he made solemn asseverations that in all that time he had not been in the way of infection) lost his palate, and a portion of the upper jaw; and who was saved by a course of mercury. I should contrast with this the case on our books, of Philip Warren, an old man, who lost the bones of the face, and died with sloughing of the parts; to whom the mercury was not administered. I might add to the catalogue, the Mulatto now in the house, who has lost the alveolar processes obviously by mercury; and to that I might

add a case of a young gentleman from the army in France, who assures me that he has neither had syphilis nor its antidote to injure his constitution, and who has an exfoliation of the alveolar, and palatine processes of the upper jaw, &c.*

Similar cases to these being always before us, are we to be influenced by the account of what has been done by the regimental surgeons of Portugal,

* Out of ten cases in the Venereal Ward, as a commentary on which these observations were first thrown together, there was only one case of well-marked syphilis, requiring a serious course of mercury, and such may be about the usual proportions; but the others were not cases of new diseases, but of disorders brought on by irregularities in practice. This was in December. In reviewing the cases in the Men's Venereal Ward *this 26th of January*, I have had occasion to remark to the pupils, that thirteen out of fourteen of the cases are referable to chancres improperly treated. The greater proportion have not had sufficient mercury, that is to say, the *influence* has not been sustained long enough at any one time. If the effect were to be security, more or less, in the proportion of the quantity of mercury used, they would all have been well; but they have been taking the remedy while their way of life has been such as to prevent its influence. This is what has brought them to their present condition, at the same time, that some of them have to attribute their sufferings to the abuse and the over-charge of mercury. It would, indeed, be matter of surprise, if this valuable medicine were to exert its influence to the destruction of so formidable a disease (as even now is presented to your eyes), and yet, that without the disease to combat, and pushed to excess, it were to be attended with no bad effects.

France, and Germany? is light to break in upon us from these quarters? But if the experience of foreign surgeons is to be admitted, in justice to them, and to ourselves, it ought to be observed, that some of them, well convinced of the formidable nature of syphilis and of the necessity of using mercury, do, at the same time, tell us that there is much in the peculiar state of soldiery, especially during a campaign, which suspends, and sometimes dissipates, the venereal symptoms. Something of the kind has also been observed among the Galley slaves. It is, at the same time, noticed by *M. Lagneau*, that when patients, received into the hospital, have had to wait the period of entering on a course of mercury, their symptoms have sometimes disappeared, by rest and the use of tisans. These are anomalies which have, in all times, had their weight, in establishing a safe rule of practice.

The reports which have reached us, at various times, of what was doing in the regiment of guards, have been embodied in a paper by Mr. Rose. Objecting, as I do, to the object of that paper, none will refuse to its author the merit of ingenuity; and the matter is there discussed, so much like one who thinks and acts for himself, that the paper cannot fail to have an influence on practice. I might venture to say to Mr. Rose, would you, in such cases as I have described above, give mercury? I think he would answer yes, these are cases which admit of no delay. And thus the question would be nar-

rowed, so as to take the shape which it always has taken, and must still take, in order to be properly discussed; viz. what are the cases which require mercury to their cure? and how are they to be distinguished from those in which other medicines are effectual, mercury noxious?

It is the duty of one, thinking and acting as the author of this paper has done, to avow his opinion, and it is good, *quantum valeat*. It carries weight in proportion to its internal evidence. And when we act as individuals, to the best of our judgment—with occasional errors and backsliding, (for the course of medical improvement is not progressive in a right line, but in circles and mazes) the general practice will be safe, and the improvement, though gradual, certain.

The question assumes a very serious shape when we see the practice patronised, and the British army dealt with, after a fashion, not countenanced by private practice; nor advancing in that gradual and safe manner which ought to be observed, when so serious a change is contemplated. Here, we have announced to us an experiment of five hundred men, cured of what are called primary symptoms, without mercury; and five hundred in another quarter; and thus suddenly are brought forward thousands of examples. In my former Volume, I said, that the patients in military life are not brought to their surgeons by reputation, that they have no power of selection. I hope my reader does not alter the collocation of the sen-

tence, and suppose that I say these gentlemen have no reputation. I offered the suggestion in order to lead the regimental surgeon to consider how much it became him to be cautious in his practice, and to direct it by the general consent of the profession, when that is practicable: for as he has not imposed upon him, those checks which we have in domestic practice, so by following his unrestrained fancy, he may commit errors from which we are saved. In these papers which I have been perusing, and which, I am striving all I can to make harmless, we find a very strong assertion made. The army surgeon, says the author, has the persons affected completely under his control. He can do what he pleases with them without restraint, and he has them for a number of years, certain that they cannot have a change of opinion, nor act contrary to his wishes.

If the writer mean fully what his words import, there is no man who has a touch of feeling in him but must wish that the case were otherwise; and to what reflections does it lead? To this, in the first place, that the regimental surgeon is bound, by every consideration of honour and of duty, to act to those men under his care as to his dearest friend. And although none have any other conception of the matter, yet there is here a meaning conveyed in the hurry of composition, which I am not only willing to believe never was intended, but which I am certain the writer never contem-

plated as an inference from these words; a rule of practice for the camp, and another for the city.

In perusing these essays, one is led to suppose the authors all agree in discarding mercury from the cure of 'primary sores:' for what else is the meaning of bringing forward these twice five hundred cases, in which soldiers have been cured without mercury. But after having perused them with this impression, how very strange does the conclusion sound, that a gentle course of mercury is proper to cut short symptoms which might otherwise last for four or five months. This practice of giving mercury in insufficient quantity, and without the absolute conviction of its necessity, and thus entering on a course, rather because it is as well to give a little mercury, is what furnishes our hospitals with the worst cases; while it obscures the character of the disease in the early stage, and injures the reputation of the specific*.

I am not surprised that in the conclusion of an essay on this subject, the author should hesi-

* The practice of giving a very little mercury has certainly prevailed extensively in the army; but I would be wrong to conceal, that there are some of the most respectable regimental surgeons who think very differently from the authors of these late papers on Syphilis. One gentleman, on joining his regiment, found the venereal disease very prevalent in all its stages, and he adds, it was not uncommon to hear the men say, that they had rubbed in six, eight, or ten days. Soon after this date, there were thirty cases of secondary symptoms in the hospital, and five or six of these, with caries of the cranium. A gentleman

tate in finally committing himself, and seek to coil his meaning in sentences of more than usual obscurity; from which we may hope to see him emerge, if Mr. Rose, as in duty bound, shall lend a light to extricate his brother officers from the very awkward predicament into which he has led them. One of his adherents has left a breach by which he may escape, and we hope to see him come forth as an advocate for the use of mercury, with somewhat more grace than we fear it is pos-

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writes, that on inspecting his regiment, he found thirty cases of venereal eruption, in consequence of what he calls the fashionable doctrines. I can very well conceive this to be the case from the conversation of officers. I was consulted by a gentleman who had returned from France, who told me he had got a mercurial blossom; and he proceeded to assure me that several officers of his regiment had the same appearance, without entertaining any anxiety about them. This blossom was a hard chancre skinned over. Three months afterwards, this gentleman had blotches and sore throat, and I ordered him a course of mercury of seven weeks. At the end of five weeks, my assistant went down to him in garrison. He was then accused of killing his patient by the other officers, who, although in the same condition as to disease, were jolly, and had no sign of mercury in their faces. They had been given to understand that it was only necessary to raise the pulse ten beats in the minute! Of the gentlemen treated in this manner, one had chancre and bubo, and the other venereal sore throat. Of these I happen to know the result. One was sent home to his friends, and went through a course of mercury; the other came up to town for the same purpose; he was put upon a regulated course of mercury, and was cured. It is humiliating to think, that in the present day such facts require to be urged anew.

sible for Professor Thomson, who resolving to grasp all the merit, has overreached his aim, and fallen headlong.

Let us now see how the matter stands in practice, and how the young surgeon is to conduct himself. Need I say that this branch of practice requires the utmost caution, and the most perfect regard to a correct rule of conduct, in more than one sense? For putting all interested motives, and all movements of vanity aside—how often is the rule assailed by the circumstances of the patient's situation, by his intreaties, by his great unhappiness? Yet so obviously wrong is it to yield to those intreaties for a milder sentence, or gentler treatment, that the very first to turn upon you, would be the petitioner! who, after a time, and looking back to the period when he first consulted you, is entitled to say—had that man been more resolute in maintaining his opinion—had he been more determined in his practice, my short month of uncomfortableness would have been over; my mind would have been at ease, and these ugly spots and this lurking evil quite eradicated!

When a patient presents himself, you look narrowly both to distinguish the nature of the sore, and to be able to observe its progress. Let us suppose the sore to be small, deep, and foul within; the surface has the consistence and colour of cheese; the edge of the skin hangs over; two holes have run together, and a tender bridle

of skin runs across. There is as yet no occasion for hurry; let us wait and observe; and in the meantime the patient is enjoined to do nothing, which, with a mind ill at ease, is hard to perform. In three days the sore is worse, "it shows no disposition to heal, it is one sore, a hard welt is around it, the overhanging edge has wasted by ulceration, and is now elevated, sharp and raw, while within the cup of the ulcer the surface is still foul." The patient is now put upon a course of mercury, and friction is the better method; when the gums become affected, the sore declares a new character, its progress is interrupted, its bottom becomes clean, the abrupt edges are rounded and close, and in three weeks it is healed; but the mercury is continued until the hardness be quite gone*. After this, the patient is not only safe, but free from all apprehension; and when his loins or shoulders ache with rheumatism, when he gets a little sore throat by cold, or head-ache from a disordered stomach, he is not overwhelmed with fears of some lurking mischief. But by this proposal of curing without mercury, the patient is kept much longer in fatigue and restraint, to get

* If the sore be healed by the operation of the mercury on the constitution, the hardness will be very nearly gone when the ulcer heals. The common source of error with young practitioners, is mistaking the effect of their acrid applications for the venereal thickening of the part; they must distinguish also the feeling of a common cicatrix from the venereal hardness.

this sore to skin over; and when it is accomplished, how stands the account? Is he well? No, not even by the showing of these gentlemen themselves, but subject to constitutional disease. Then comes the treatment by sudorifics, bleeding, the warm bath, and sarsaparilla, with a loss of time, from one to four or six months.

The misfortune of all this is, that the experiment on the progress of a pox, requires several years to complete. And these gentlemen can give us no assurance, that a disease which announces itself by constitutional symptoms for six months continuance, is eradicated, or that it can be eradicated. If the same influence which has promoted this practice so extensively in the British army, do not interfere to stop it, our soldiers will be brought into a state nothing short of the unfortunate women who lie in the streets*.

In conclusion, in an unlucky hour it has been said that the proof of a venereal sore, is its not healing without mercury. On this unadvised expression, has there been built this new practice for the British army. On the other hand, I affirm, that with cautious intelligent surgeons, the *rule has always been to take care that you do not heal the sore by your applications, until you have ascertained its nature.*

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* We might expect that there were records to be found, of the serious effects of similar opinions, during the American revolutionary war.

As to the other point of our being able to remove a certain train of secondary symptoms without mercury, neither is this to be doubted. But no man can affirm what he has no means of ascertaining—that after the prevalence of secondary symptoms for six months, he has by such method cured the patient of that disease. In some men, and especially in old men, the disease is of very slow progress; we see it break out in them very long after the infection. We see the disease propagated to the offspring after the recollection of the attack is lost, and would almost be tempted to fall into the opinion of those, who think that the adult constitution may sometimes oppose the influence of the disease, while it is exercised on the fœtus.

Of all the statements of Mr. Hunter, none is more important in practice than this, that we can destroy the active state of the disease, and yet not the latent disease. Mercury cures secondary symptoms, and yet we cannot absolutely, and to the last degree of certainty say, that even with mercury we can cure a pox thoroughly rooted in the constitution.

Now the disease is active when it is entering the constitution, when the primary symptoms are about to become secondary symptoms. Then by mercury we can assure the patient's safety; afterwards it is a strong probability that you shall, but it is no longer a certainty. It is this consideration, more than any other, which makes me desirous that my pupils should have a correct notion of the treatment of a chancre.

REPORT.

BEING THE SEQUEL OF THAT ON BURSTING OF THE URETHRA; CONTAINING CASES OF OBSTRUCTION FROM STONES, OR FROM INJURIES TO THE URETHRA; OR SUCH AS REQUIRED THE BLADDER TO BE PUNCTURED.

TO those of my readers, who are aware of the importance of the diseases of the urinary passages, a Second Report on this subject will not be unacceptable. They will not be startled with the dangerous character of these cases, since they must remember that I am not in the habit of noticing the common every-day occurrences, which attend strictures of the urethra, and especially when they are doing well under the ordinary practice. I have taken my pen, only when I have foreseen an unfortunate termination; because, after all, it is principally from such cases that we can draw improvement. Without that authority for our opinions, which is to be found in anatomical examination, we are likely to form as erroneous conjectures, as those authors of the last age, who contented themselves with talking of facts, while they were entertaining idle fancies about the urethra and its diseases. To have balanced those cases, with others of a different complexion, would have been to render my intentions suspected.

In offering these, I confess, that I am proceeding on an assumption, that our students and young practitioners, consider such diseases in a less serious manner than they ought; that they become familiar with them, without having studied them—without being acquainted with what is most necessary to be known. If I have been right in undertaking this work, it is a part of my duty to point out the symptoms which are most alarming in these diseases, and the insidious manner in which danger approaches.

STRANGE MISAPPREHENSION IN A CASE OF RUPTURE OF THE URETHRA.

Thursday, 26*th Sept.*—I had a view of a case this morning, which from the reflection it gave rise to, I think fit to be recorded.

About eleven o'clock, a tradesman came to entreat my assistance to one of his lodgers, I said I should come to him at one o'clock, to which he replied, shaking his head, that it would be all over by that time. When I asked him what was the matter, he answered, by relaxing his knees a little, and holding his hands betwixt his thighs, as if he grasped a large body, "his privates," he said, "had suddenly enlarged to an extraordinary size!"

I went to the gentleman with all speed, but I found him speechless, with his eyes fixed, and his features working in convulsions; he could no longer swallow; he was irrecoverably lost, and, perhaps,

I should have left the house. On turning down the bed clothes, however, I saw the scrotum enormously distended. When did this appear, I asked? and an intelligent friend of the patient said, it had not been so last night. They added, that last night he had been surprisingly well, and walking about. This, I confess, surprised me, for I had conjectured, that he must have been brought to his present condition, by effusion on the brain, in consequence of long continued irritation; and it was new to me, to find a patient, with this complaint, well at night, and insensible and speechless in the morning.

On seeing that the bladder had risen above the pubes, that the scrotum was full of urine, and that there was a hard tumor in the perineum: I had just time, from other avocations, to use my lancet freely upon the tumor, in the back of the scrotum.

On returning, three hours after, I heard more of the case. This gentleman was thirty-six years of age, he had been long troubled with a stricture in the urethra, near the bladder. On Saturday night he had been unable to make water, and had gone to a surgeon, who had attempted to use the catheter, but failed, and my informant added, he had ruptured the urethra. Other surgeons had been called in, and as they saw the water coming through the penis, they did not see occasion to puncture the bladder.

The usual attendant being sent for, I heard

opinions, and saw practice, which I could not have believed to prevail in the alleys of London, though well aware that they are as distant from science and the schools, as if they were placed in the Antipodes. He informed me, that he had introduced the catheter, and had, by inhalation, discovered that there was no urine in the bladder; on the contrary, he said, I drew only oil into my mouth; this latter expression gave me to understand, that he had sucked the bladder. The swelling of the scrotum, he called inflammation, and putting his hand upon the belly, he bade us observe, that the bladder was as hard, and as much inflamed as the scrotum. I had only one thing to do, I put my finger into the rectum, proposing to puncture the bladder, if it were prominent. It was not to be felt, and I had nothing further to offer.

On dissection, there appeared a firm stricture of the urethra, which did not admit the probe. The urethra was ruptured anterior to the stricture, and ulcerated behind it. The bladder had become distended, and was very thick in its coats.

TUMOR IN THE PERINEUM, AND EXTRAVASATION OF URINE, FROM STONES OBSTRUCTING THE URETHRA.

This old man, sent in by Sir J. B., has for many years been subject to irritation in the urinary organs, and to stoppage of his water, and at diffe-

rent times he has passed small calculi, of a very irregular shape. His wife has shown us some of these, they are prostatic calculi.

When I first saw him, he was obviously in the utmost danger. He was asleep, and when I awoke him, I found his voice small, his features sharp, his hand cold, and his pulse very feeble.

On turning off the clothes, the scrotum and penis were found distended, and a considerable tumor of the perineum was evident. The tumefaction was not from inflammation, but from extravasation.

The flexible catheter was used, it did not enter the bladder, it was obstructed at the turn of the urethra. Notwithstanding that the instrument did not enter the bladder, urine and pus came pretty freely through it. This proved to me, that there was a sac, formed by suppuration, which contained urine. Another attempt was more fortunate, the catheter passed through the abscess, and reached the bladder, and a pint and a half of very fœtid turbid urine was drawn off. In passing in the catheter, there was a sensation as if the instrument touched a stone. The belly had been much distended, now it was flaccid, and as if emptied, without recovering its usual tone, by the support of the abdominal muscles.

The abscess lancet was then used; first it was passed into the perineum, so as to open the fascia, and then turned with the point forward, into the scrotum. Two punctures were then made into

the scrotum, one on each side of the septum. The fluid drained off copiously through these openings. Fomentation cloths were applied, and an opiate enema ordered.

Next day the mortification of the scrotum had begun, and the patient's strength was failing. There lay near him, a big Irish labourer, in the same condition, as to the parts; but this patient is old, and his constitution is exhausted. He died on the 4th morning after he was received into the hospital. On examination, the scrotum had much putrid matter in it. On splitting it, and dissecting it back, there was seen in the perineum, a cavity of the size of an egg, which was crammed with small stones. In the prostate gland were many of these calculi. The bladder was contracted, and the inner coat inflamed.

Remarks.

This patient had a stricture in the urethra, which of itself would have permitted the enjoyment of life, but it was sufficient to impede the discharge of the prostatic calculi; these gathered behind the stricture, and lodged in the perineum. They had at length sunk from the canal into the surrounding cellular substance, and there forming a sac, they permitted the discharge of urine, until one calculus larger than the rest, fell against the stricture. This obstructed the passage, and then came the powerful efforts of the bladder, propelling the urine into the preternatural sac in the perineum;

its insufficient walls gave way, and let the urine readily into the cellular substance of the scrotum. The age and the exhausted state of the patient will account for the conclusion.

Examples of urinary calculi sticking behind the stricture of the urethra are in the Museum.

When it is discovered that calculi obstruct the urethra, they ought to be cut upon and extracted.

COMMON CASE OF RUPTURE OF THE URETHRA.

The case above alluded to, was similar to some of those given in a former report. A very big man, apparently betwixt forty and fifty years of age, was brought in, with the urine extravasated into the scrotum and the penis, and lower part of the belly. The case served to show, among other things, the insidious course of these diseases of the urethra. For, notwithstanding that the urine had burst out thus extensively, and that no instrument could be passed into his bladder, yet the patient had all along been ignorant that he had a stricture. There is only the following record on the case book at this time.

Aug. 16.—This man has made an escape. The decided incision into the lower part of the scrotum has effectually drained the scrotum and the integuments of the belly, so that very little slough has formed. There is, you may perceive, a suppuration under the integuments of the pubes,

but the cellular substance has separated, and a good discharge is established. The integuments of the scrotum too, although undermined, remain, and suppuration has taken place. Urine comes by the lower opening, and by the urethra. The pulse is now good. He has recovered his natural looks; and there is nothing to prevent us from beginning the operation to remove the stricture of the urethra.

This man was made an out-patient on the 26th of September. The Report states that a singular change has taken place; for when first brought in, his pulse being low and intermitting, and his features shrunk and haggard, he appeared above 50; now he is in his natural character of a great good-natured fellow of 30, that would run his round black head into any kind of mischief, to show his gratitude.

RUPTURE OF THE URETHRA, FROM A FALL.

This young man, in pursuing a cat over the house-top, fell through a sky-light, and came astride upon the balustrade of the staircase. He has not been able to pass a drop of urine since. There is a swelling around the bulb of the urethra and crura penis.

On first seeing him, I enjoined the dresser not to use the catheter, but to apply nine leeches to the perineum, to give him a laxative, and afterwards place him in the tepid bath.

Next day, the bladder being distended, I attempted to introduce the catheter, and failed; and this owing, as I thought, to the distended and unyielding state of the perineum, from extravasation of blood. I therefore opened the swelling in the perineum, and let loose a quantity of blood; and after the incision, I passed the catheter into the bladder.

It was perhaps fortunate that the urine did not flow until it was drawn off by the catheter; for if it had, it would have passed through the ruptured urethra, and amongst the extravasated blood. When the catheter was introduced, it might be supposed that the difficulty was over: all serious apprehensions were indeed removed, but much attention was still necessary.

The silver catheter being retained, the wound suppurated and closed; but broke out again, discharged matter and urine, and again it closed. Observing this to my pupils, I requested them to consult among themselves, and advise what should be done. They determined that it was owing to the rigid silver catheter that the opening was inclined to become fistulous, and that a pliable gum catheter would have a happier effect. I yielded to this suggestion, but the opening remained fistulous. It was now that my young consultants saw that the presence of the catheter produced a constant discharge. We determined that a large hollow bougie should be introduced, to draw off

the urine, three times a day; and under this plan the young man got entirely well.

Remarks.

In reviewing this case, where the urethra was ruptured by a blow, my reader will observe a consequence of the injury which is kept out of view, I may say, with singular pertinacity, viz. that the obstruction proceeds not directly from the extravasation, and is not owing to pressure upon the canal. It is the injury which the wound inflicts, and the consequent disorder and loss of consent among the muscles of the perineum and neck of the bladder, which prevent the discharge of urine.

In regard to the propriety of opening those tumours of extravasation, there may be some doubt. Thus, it may be questioned, whether the effusion of blood really obstructed the bougie. But surely, when there is a tumour of blood in the perineum, and when, as here, the blood is flowing from the extremity of the urethra at the same time: when, therefore, there is reason to suppose that there is a breach of the urethra, we have a very sufficient reason for opening the tumour. For if the urine should escape from the urethra, and find no ready exit by the wound, it would produce all the consequences which we have witnessed in the former cases of extravasation.

WOUND OF THE PERINEUM.

Henry Sanson, aged 34.—Has a bruise and deep wound of the perineum. It appears that in leaping out of his cart, to stop his horse, he fell upon his face, and the wheel went over the top of the left thigh and haunch bone. He says, that he bled a great deal from the fundament, while they conveyed him from Edgeware, where the accident happened, and since that his fæces have passed from him involuntarily, accompanied with discharge of blood.

When received, he was bled, and had a dose of the laxative mixture of the house. The house surgeon reports that the catheter passes freely: but Mr. Bell, on attempting to introduce it into the bladder, failed; and it appeared that when the instrument had been supposed to go home into the bladder, it passed out of the urethra into the wound, and by the side of the rectum. When the finger was introduced into the wound, it did not reach the bottom. It is an irregular torn wound; the ramus of the os ischii is either fractured, or there is a deep cut in it. On withdrawing the finger, blood and urine escaped; and from the smell, we suppose that the rectum must communicate with the wound. Pulse 100, and hard. *App. Hirudines octo ad imo Abdomine et Capiat Misturæ Salinæ Cochlearea tria Ampla, cum Tinct. Opii gtt. xv. ter in diem.*

Aug. 10*th.* Fomentations and the tepid bath have been most agreeable to his feeling. The use of the catheter has been again attempted. This is not to be repeated, as the urine appears to drop from the wound in sufficient quantity to remove our apprehension of over distention of the bladder.

12*th.* A consultation has been held on the propriety of puncturing the bladder. The following were the circumstances to be considered.

1. There is a tumour, about as large as I can grasp with my hand and fingers, when they are spread on the belly. The tumour rises above the pubes, but not quite to the umbilicus. To-day it appears that the general swelling of the belly has increased, but the tumour of the bladder does not appear to have enlarged. A doubt is entertained whether this be the bladder which form the distinct swelling in the lower part of the abdomen.

2. When the finger is passed into the anus, or when passed into the wound, which indeed is here the same thing, we cannot feel the bladder. Now, if the bladder were distended upwards, as high as the swelling would seem to indicate, so must it be distended towards the outlet of the pelvis; and in that case it would be felt by the finger in the wound.

3. There is another circumstance which, of itself, is decisive; the urine continues to drain off so freely, wetting through the sheeting and bedding,

and dropping to the floor, that it is scarcely possible that the bladder can be much obstructed. What then is this circumscribed tender tumour above the pubes? Is it the bladder containing coagula of blood? Is it extravasation of blood betwixt the abdominal muscles and the peritoneum? Can it be peritoneal inflammation? At any rate, the operation is out of the question, although the patient be in the most imminent danger, and will surely die, for the pulse is weaker, the countenance dejected, and the skin has a yellow hue.

13. He remains much in the same state as yesterday. The urine drops away freely, and sometimes comes in a gush through the wound. He thinks his belly is distended with flatus—and I would ascribe the tumour in the abdomen to flatus, if I could account for its being so accurately circumscribed. They are to endeavour to throw an enema past the rupture of the rectum. He is taking a pill of the extract of colocynth with calomel, and the saline mixture.

16. This man lives, but is nearly exhausted; his countenance is deathlike; there is a yellow suffusion upon the skin, and the belly is very tender. Still there is a fulness and hardness over the pubes, so like the distended bladder, that it gives me great uneasiness, lest I shall hereafter find that I have allowed this aggravation of the other causes of his death.—Died on the 17th.

Dissection.

The bladder was moderately distended, and dark coloured with inflamed vessels. The colon was much distended, forming three acute turns, one above the other, and attached to the bladder. The body of the right os pubis was broken through, and also the ramus of the left os ischii.

The first rising of the inflammation, after so great an injury, destroyed him. My reader will now understand the object of my anxiety, during the patient's life, to have been caused by the turns of the colon which had attached themselves to the inflamed bladder, and which I mistook for the distended bladder. He should remember the possibility of a similar occurrence.

(Injury of another Kind.)

ABSCESS OF THE PERINEUM, FROM DIASTASIS OF THE OSSA PUBIS.

In the same ward with these men, lay one with abscesses in the perineum, and about the root of the penis. In the absence of my colleague, this patient fell to my charge for some time, and although now, unfortunately, I can understand the case, it puzzled me exceedingly at the time. To appearance, it was an abscess in the perineum from obstruction of urine, and when the urethra was found to have no stricture in it, it was still natural to suppose that inflammation and irritation of the canal had produced abscess in the cellular

substance; but, on consideration, there did not seem ground to retain this opinion. Then it was inquired, if he had hurt himself, or had got a blow upon the part? He had not suffered in that way exactly, but then came out the true story.

He was a powerful little man, and one day striding over a very heavy sack of tallow, and endeavouring to lift it, he felt something give way at the lower part of the belly. He became lame, and then followed the inflammation and suppuration. This man died of a dysenteric affection, on the 27th of January. The symphisis pubis was found destroyed, and the ossa pubis, near their union, carious and rough. Indeed, on each side, a portion of the bone was dead and exfoliating; a strong preternatural ligament connected the bones loosely at the upper part. There was an abscess behind the ossa pubis, and matter all around.

Remark.

This was an accident like what has taken place in women during delivery; when, by the impacting of the child's head in the pelvis, and the force of the labour pains, the anterior symphisis has given way, and the bones of the pubes have parted.

When this happens, there is probably some previous disease of the cartilages. The consequence is the motion and attrition of the bones, and hence a succession of abscesses, as in the present instance.

CASE REQUIRING THE BLADDER OF URINE TO BE PUNCTURED.

22d May.—*Williams*, aged 77. He was brought into the hospital under great suffering from obstruction of urine. He reminds me of his being under my care two years ago, and states the circumstances very distinctly. He has had strictures for many years, and has suffered a great deal from temporary obstructions. On the occasion alluded to, the belly was much distended, and he thought he must have died, not being able to make a drop of urine. He states that I introduced a small bougie, not into the bladder, but into the stricture, that he was then made to strain, and at the same time the bougie was withdrawn, and a little urine flowed ; that after this he was sent to a warm bath, and got an opiate, and that by little and little he had more perfect relief. Since that time he has been very careful, and has had no severe attack till the present.

He thinks the present difficulty has proceeded from cold, and not from excess of any kind. The obstruction came on gradually; he came to make water in smaller and smaller quantity, and with increasing pain and difficulty, until now, that for forty-four hours not a drop has passed.

He is in a situation of great danger. He has been bled and put into the warm bath, and has had opiate clysters. An attempt has been made to

pass a small wax bougie into the stricture; it has failed: neither has the attempt, with a smooth catgut bougie succeeded. He has been in great agony, and is now exhausted with continual suffering, and although distinct, when roused, he is fast falling into a lethargic state. The bladder is very much distended and tense, and rises to the umbilicus. It is not only to be felt, but is distinctly visible, and the form is an irregular cone.

At two o'clock the operation of puncturing the bladder, through the rectum, was performed, and the reasons given to the pupils were these:—

1. The distention of the bladder is so great, that we may expect a rupture, and the discharge of urine into the cavity of the abdomen.

2. The patient is in the state that will soon be succeeded by delirium.

3. Were he now to be relieved by the discharge of a few ounces of urine, it would not be effectual; nothing can save him but so free a passage as will remove all irritation, and all occasion of painful exertion.

4. He is now nearly exhausted; further attempts, or a protracted operation, would only hasten on still more unfavourable symptoms; the puncture of the bladder, through the rectum, offers the hope of immediate relief, without a possibility of increasing the danger. Unless he has twelve hours rest, and cessation of irritation, he will be inevitably lost.

The bladder was punctured through the rectum, and four pints of urine were drawn off, to the inexpressible relief of the patient.

23d. The house-surgeon having neglected to retain the elastic gum catheter in the canula, the canula is found to have slipped from the orifice in the bladder, while the patient was at stool. It has been withdrawn from the rectum.

24th. He continues better. He passes the urine by the urethra. There is blood in the urine, as if from the dissolving of a coagulum in the bladder.

25th. There is a considerable swelling round the lower part of the belly, near the pubes. There is fulness in the perineum, and along the tract of the urethra; pulse 100 and full. The laxative to be continued until he has a full evacuation, after which the opiate and fomentation are to be resumed.

30th. The obstruction in the urethra has returned. The swelling in the perineum has subsided. The urine comes freely by the rectum.

1st June.—Pulse 100.—The patient quite sensible; the belly is soft; the urine comes by the urethra; he has hiccup. Urine still bloody.

2d. He has been convulsed in the night; he is now free of suffering, but low and cold, and his features shrunk.

Died the succeeding evening.

The friends did not permit the examination of the body, but the bladder was taken from the lower opening of the pelvis, and is in the Museum. The coats were thickened, and the inner surface

was studded with white spots of coagulable lymph, like many of the specimens which are exhibited beside it, and which are a consequence of stricture, and independent of the operation. A bloody and ropy fluid was contained in the bladder. The prostate gland was surrounded with abscesses, from which thick white pus was forced out. The urethra was largely ulcerated, so as to be rendered quite irregular; and the ulcerations had a hardened base, indicating that they had been of some standing.

Observations.

There is always danger of a single case like this, making too strong an impression. There is here, you may imagine, an authority for puncturing the bladder, when it is distended, and rises into the abdomen. Very much otherways; you will see, in the course of the season, many younger men brought into the hospital with the bladder risen above the pubes, and relieved by bleeding, the warm bath and opiates, purges and anodyne clysters. But here, there were peculiar circumstances, as the great age of the patient, his exhausted condition, the great and increasing distention of the bladder. For you will observe that sometimes the bladder is distended, and there is a stilicidium urinæ which delays the further distention, and allows time. But here there was total obstruction and increasing distention. The distention, in this case, had so entirely destroyed the power of contraction,

in the bladder, that had we passed an instrument into the bladder, through the urethra, it must have remained to have been of service. Nor could it have so effectually relieved the distention, or remained in its place, with so little irritation as the canula.

The state of the bladder and urethra, and prostate gland, gives us the less reason to regret the slipping of the instrument from the bladder. It is no apology that this accident has often happened. It is essential to the effect of this operation, that the canula or bougie be kept in the wound for two or three days. After which, when the parts have suffered some inflammation and condensation, the urine is freely discharged from the bladder into the rectum. Had this been accomplished here, even with all the marks of disease, which the parts exhibited, I think the life of the patient might have been prolonged.

BURSTING OF THE URETHRA, AND SLOUGHING OF THE PERINEUM, WHERE IT WAS NECESSARY TO PUNCTURE THE BLADDER.

The preparation, 14. *I. M.*, in which there is shown a section of the bladder with the canula remaining in it, is connected with a detail of sufferings bearing a close relation to the present subject.

About the middle of last March, a gentleman of seventy years of age, called at my house, whose complaint was of a small very hard tumour, attached to the lower part of the urethra, and attended

with discharge from the urethra. His hair had been black, but was grizzled; his cheeks had each a spot of broken red, and the skin had a yellowish discolouration. I passed a bougie to ascertain how far the urethra was compressed by the swelling, and found it obstructed, although he could still make urine pretty freely. However, I assured him, that he would not continue to do so long, unless he was very guarded in his conduct. He was one of those men whom there is no danger of alarming too much. I made him promise to live very low, to rest on the sofa, to apply leeches to the part, and to bathe frequently with tepid water. He returned to me five days after, very ill. The discharge from the urethra continued; the swelling had considerably increased; he made water with difficulty, and complained of spasms at the neck of his bladder. I ordered leeches to be applied to the verge of the anus; mucilaginous tepid drink; an anodyne with the liquor potassæ, and the starch clyster. These soothed him, and made him, as he said, quite comfortable, and so he allowed eight days more to pass without seeing me. Next time he came, he was very ill; the tumour or swelling occupied the whole root of the penis, and the prepuce was œdematous. He had been attacked with shivering, and was very feverish, and exhausted. I now, peremptorily, refused to prescribe for him, unless he would give me his address; let me visit him at home, and submit to what was necessary. I found that he had come five miles

in a hackney coach in his present condition, and was willing to do so every morning. However, his sufferings prepared him for believing that what I had foretold would take place, and that he was in extreme danger.

Next day I visited him at his own house. The bladder had risen above the pubes ; but the urine was still passed, so as to deceive him. He believed that he emptied the bladder at each effort he made. I drew off the urine by a small catheter, ordered him a dose of calomel and opium, and a fomentation to the perineum.

When I saw him again, it was evident to me, that the inflammatory tumour and abscess which had formed by the side of the urethra, received the urine into it, and that the urine kept up the irritation and inflammation. I therefore opened the abscess behind the scrotum, and was again so fortunate as to draw off the urine. The passage admitted only the smallest flexible catheter.

Next day matters were worse, and the catheter was introduced with much difficulty. The succeeding day it was impossible ; from the extensive inflammation around the original obstruction, and the irregularity of the opening by ulceration into the urethra. I therefore opened the abscess more freely, and was lucky enough without much disturbance of the parts, to pass a gum catheter from the abscess in the perineum directly into the bladder, by which a great quantity of offensive

urine was let off, and all danger of distention of the bladder or infiltration of urine was removed.

After this, there was an interval of some weeks, during which he went on improving under the care of the apothecary. Being again called to him, though he spoke cheerily of his condition, and of his comparative ease and comfort; yet seeing him thinner, and much reduced, with a frequent pulse and dry tongue, and heat of skin, I permitted his attendant to withdraw the catheter. It appeared to me that the presence of the instrument was a cause of irritation, and kept up discharge, both from the bladder and prostate, and from the abscesses along the urethra. Instead of remaining constantly in the bladder, the catheter was introduced, morning and evening. About a fortnight elapsed before I was again called to him. By this time the passage had become narrow and intricate, so that sometimes the catheter could not be introduced. I introduced it once more from the perineum, and let it remain, with the intention of making the canal more pervious.

My patient's condition was not mending; he lost that great regard which he had entertained for his surgeon, in the early part of the attendance. He also lost all tenderness for a most attentive wife and daughter. That morbid state of mind, which sometimes attends disease of the bladder, was fast encroaching upon him. I found that he had written twenty letters to people he knew

nothing of. It therefore became necessary to make some impression on him. I spoke to him very openly of his condition; I made him acknowledge that I had long forewarned him of all that had happened, and of his present sufferings. I took upon me to say what would be the consequence if he did not summon all his resolution, and take his kind friends into favour, and submit, without violence, to what was necessary, and for his good. In short, I told him that he must consider himself no longer in a condition to dictate with violence. I informed him that his restlessness and violence of temper would else increase upon him, until it would be necessary to restrain him. This discourse alarmed him, and next day his poor wife, with tears, acknowledged his returning affection and better conduct.

The catheter was in the meantime used to draw off his urine, and sometimes it was continued in, when the passage became narrow and the introduction difficult. But in an irritable fit he did that which he had often done before with impunity. He drew out the catheter, and threw it to the end of the room. The apothecary could not introduce it again. The urine accumulated in the bladder, and in twenty-four hours they sent to me. This time I tried in vain to do what I had often done before. The suppuration by the side of the urethra, and its irregularity and ruggedness prevented me from passing the catheter. Our unfortunate patient depending on me, had always

made light of the difficulties he occasioned to his every day attendant, and now he was greatly alarmed.

The next day, having tried all means to procure urine, and in vain, no drop coming either by the abscess in the perineum, or natural passage, I was under the necessity of puncturing the bladder.

I passed the trochar above the pubes, because we had already experience of the effects of a tube introduced by the perineum, and because the irritable, and I may say, turbulent state of the patient, did not admit of the attentions necessary to preserve the canula in its place, if I had performed the operation by the rectum. The bladder had risen nearly to the navel, and was very tense.

This operation gave him present ease, and a proper apparatus being adapted, they continued to manage very well without me. He turned himself to one side, and withdrew the cork, and emptied the bladder three times a day, and thus passed another fortnight. But the constitution had been suffering for a long time, and his strength became reduced more and more. And, although during my visit he made no complaint to me, I saw that there was an irritation preying upon a constitution originally bad. He lost flesh; his appetite failed, his tongue was brown, his pulse was very frequent, his urine became full of sediment, and very fœtid. Gradually the powers of life were exhausted. He died on the 22d of June.

This gentleman had his own notions on many

subjects. He had some respect for surgery, but absolutely none for the physicians, and refused all assistance of medicine.

Observations.

Here my reader will see the distressing difficulties of practice, arising from the irritable machine we have to work upon; and he will readily conclude that where operations on the bladder are to be performed, old age and a debilitated constitution reverse those expectations, which would be natural and well founded, were the patients youthful and in health. The operation of puncturing the bladder affords time for the powers to rally, since it gives a temporary relief from suffering; but where there are other permanent sources of fever, and disturbance, as here, viz. extensive abscesses in the perineum, inflamed scrotum, and disease of the prostate gland, besides the irritation from the presence of a tube in the bladder—these in an old man with a constitution nearly worn out, will, I believe, sufficiently account for the event. The operation prolonged the patient's existence, and relieved him from the pain of frequent and ineffectual attempts to expel the urine.

I shall present my readers with another instance of those unfortunate complications, in which, while it is necessary that the leading principle of practice be kept in view, and a certain duty be performed to the patient, we are nevertheless unable to remove the accumulated causes of irritation.

ANOTHER COMPLICATED CASE, WHERE, INSTEAD OF PUNCTURING THE BLADDER, THE URETHRA WAS OPENED.

The account of the following case is drawn up by the surgeon in attendance. I shall state my own views, and the reasons for what I did, in conclusion.

July 16*th.*—" ———, 46 years of age. He has had difficulty of passing his water for many years, and for the last seven years, he has been liable to frequent and alarming attacks of retention of urine. For three years he has not made a stream of urine, but has had constant stillicidium urinæ.

" *He has twice changed his surgeon before he* came to me; under the first, he underwent several severe applications of the caustic, the consequences of which alarmed him exceedingly. He retains a more favourable opinion of his second surgeon, for by his assistance, he can pass a large sized bougie nine inches into the urethra; but still he does not pass his water better than he did before."

" On examining the position of this bougie, when he introduces it, I find the point near the verge of the anus! On passing down a small bougie slightly curved, I find it obstructed at six inches down; and on pressing it further, I find it wedged and held, proving that it is in a stricture, and not in a lacuna. I am satisfied

that the passage of nine inches in depth is a false one."

"I proceeded very cautiously to dilate the stricture, by passing small bougies; occasionally I touched the stricture with the caustic bougie, and by thus persevering in a mild practice, and attending to his health, which was in a wretched state, in the course of two months he was wonderfully better. His bladder was able to contain a considerable quantity of urine; he had regained the power of throwing it out with a jerk. His greatest distress was a complaint in the lower part of his intestine, particularly in the rectum. Mr. Bell saw him at this time; he advised him to go into the country."

"But he had been twice dismissed to the country, and was now resolved to remain in town, and prosecute the cure."

"On the 9th of October, I gave him a touch with the caustic, such as I had often done before, and hitherto with uniform advantage; the bougie passed further than usual. In the night I was called to him; he now told me he had been out at dinner, and had taken wine—that in the evening he found himself so well, that he had taken porter to his supper. The urine was obstructed. He would not suffer himself to be bled. I gave him anodyne clysters, and afterwards put him into the bath—here, after a very considerable time, some ropy mucus began to flow from the penis. This I assisted by introducing a bougie, and, upon the

whole he voided a considerable quantity of mucus and urine."

"He passed the next day in a very restless manner, but the urine flowed, and his spasms were relieved by repeated doses of an antimonial mixture."

"*Saturday.*—Mr. Bell visited him to-day at my request. The patient has passed a great quantity of urine mixed with mucus. His bowels are in a distressing state; his stools are white, he has pain and tenderness of the belly; he has had twelve leeches applied to the lower part of his belly, and is taking Hoffman's anodyne and laudanum in the camphor mixture."

"On Monday, Tuesday, and Wednesday, the symptoms continued more favourable. He passed his urine more freely, and his chief distress was tenesmus in passing glairy mucus from the rectum. On Thursday the irritation in his rectum was excessive; and on Friday, the retention of urine returned, with a fulness in the perineum. Leeches were applied, and he was afterwards put into the tepid bath. On Saturday morning it was found that he had passed a very restless night. He complained of scalding when making water; his penis was slightly distended. I brought Mr. Bell to see him at eleven o'clock. He deferred the operation till after his lecture."

[I shall here introduce a passage from my own Note Book.]

In the morning of Saturday, I was about to

open the perineum. But, I reflected, that although I could by this relieve him from the present urgent symptoms, I would not have had it in my power to have laid the foundation of a permanent cure. I therefore deferred the operation till I had the proper instruments by me. I confess, too, that I wished to see the case a little more distinctly marked. The integuments were full, and the preputium quite distended; but this alone did not authorize the operation, since I have seen a chrystalline state of the preputium nearly as large from inflammation. But this swelling of the penis coming after violent straining, where there was a stricture so narrow, that the patient had not made a tolerable stream of water for years, confirmed me in the propriety of doing an operation, since the dangers of delay were much greater than those of the operation.

At four o'clock he had further calls to make urine, without á drop escaping, and the penis was more distended, and a slight fulness of the scrotum shewed what would presently be the consequence of delay.

I introduced a catheter down to the stricture; I then made an incision into the perineum; no urine flowed. I pushed the point of the knife towards the extremity of the catheter, and when I had pierced the fascia of the perineum, a jet of pure urine followed, sufficiently demonstrating the necessity of the operation. Not satisfied with this, I cut into the urethra, near the point of the

catheter, and then taking a common trochar, I pushed it slowly backwards, so as to pierce the stricture. In doing this, I introduced the finger of the left hand into the rectum, to be an additional guide. It was not my purpose, to pierce the bladder, but only the stricture, and to lodge the canula in the urethra behind it. I therefore two or three times withdrew the stilette. When I saw the urine flow through the canula, I was satisfied, and let the canula remain. The result of the operation was a free exit for the extravasated urine, and a free discharge from the bladder.

[*The attending Surgeon's Journal resumed.*]—Ten at night. He feels very well. Sunday. He is easy, but for his bowels, which continue to tease him. Monday. He proceeds well; the penis is inflamed; but the scrotum has regained its natural appearance. He continues to pass a great quantity of mucus like jelly, by the anus. A large warm clyster has brought away fæces. The urine is discharged by the canula. He is taking small doses of rhubarb and opium with the chalk mixture. An abscess in the penis has been opened, and has discharged matter and slough.

Thursday.—He continues to suffer from something wrong in the rectum, although the tenesmus be diminished. He has been taking the Pulv. Hydrarg. Cum Creta, and an absorbing mixture with rhubarb.

On Saturday and Sunday he was worse, and

Dr. Southey and Mr. Bell were called to him. The canula was withdrawn, and a carrot poultice applied to the penis. As opiates seemed only to increase the irritation, he was ordered a pill of conium, hyoscyamus, and ipecacuhan, with the continuance of the emollient glysters. For some days he continued in this state, but declining. His tongue was red at the point, and black on the back part, his pulse weaker, and still he was passing glairy mucus. After the operation the urine gave him no uneasiness. He was put on more nourishing diet, with bark and wine. [The report here is full of minute matters, which it is not necessary to give. He had hiccup on the Monday, and continued sinking.]

Dissection.

A small abscess had formed under the pubes. The appearance of the abdominal viscera was natural. The bladder was contracted and thickened.

On drawing up the bladder, an abscess burst, which was situated betwixt the bladder and the rectum. This abscess communicated with the rectum. The prostate gland had almost entirely disappeared, for nothing remained but its walls forming the sac of a large abscess. The inside of the bladder was not inflamed, but the inner coat had formed several pouches, which were full of the same ropy matter which came from the penis. The rectum was found to be extensively ulcerated, and about four inches up, the coats had a scirrhous hardness, and a large

hole communicating with the abscesses before described. The kidney of the left side was enlarged, and full of pus.

Remarks.

In this instance I relieved the patient from the obstruction of urine in the manner I have often practised. The stricture is here the cause of the obstruction: why should it not be opened, and the bladder relieved? since it not only affords a passage to the confined urine, but lays a foundation for a radical cure. This operation, when performed for a stricture of the urethra, (not curable by other means) and where there is no complication nor destruction of parts by the extravasation of urine, is perfectly successful. I believe this manner of relieving the bladder would be more followed, if surgeons were aware, by as many proofs as I have before me, that the membranous part of the urethra is always dilated in stricture.

It has been said, "when the catheter is obstructed, and can by no means be forced into "the bladder, what is the difficulty? Some stric- "ture amounting almost to an obliteration of the "membranous part of the urethra, or an indu- "ration of the prostate gland!" To this I answer, that it is quite a misconception: in upwards of a hundred cases of obstructed urethra, examined by dissection, I have not found one where the canal was obstructed further back than that part, (naturally narrow) where the urethra is embraced

by the ligament, and suspended to the os pubis, or where in tracing it backwards, it leaves the bulb of the spongy body; and uniformly, when there has been a narrow stricture in the urethra, that portion of the canal which is called the membranous part, and also that which is embraced by the prostate, have been found remarkably dilated; and this especially where there has been stillicidium urinæ.

On this head, I enter a protest against the advice conveyed in the following passage: "If the "catheter could be thrust through this obstruc-"tion, and driven into the bladder, even at the "expence of some violence and much blood, would "such rudeness be fatal?—by no means; such an "operation would, on the contrary, give present "relief." What a license is here for heavy heads and hands! But what follows is worse. "Dease, "a man, intrepid and fearless, and who had not "(to a surgeon, perhaps, it is no reproach) all the "delicacy and gentleness of nature, which was so "justly admired in Dr. Hunter, was in the habit "of driving his catheter right onwards into the "bladder, when at any time gentle means and "art or cunning failed: he allowed no degree of "difficulty to frighten him from his purpose," &c. Intrepid and fearless are good words, when well applied; and so are gentleness and art, and cunning; but they are here so strangely thrown together, as to present the idea of an odd sort of monster, which I am pretty well assured never

existed, to be admired, respected, and loved, as I have heard Mr. Dease was. Be that as it may, the practice is most dangerous, and the worst that ever was divulged. Let me entreat my reader never to yield to the temptation here held forth. It were better to puncture the bladder at all the three places at once, than that such a liberty as this should be permitted to the young surgeon.

We have in these cases exemplified three different modes of relieving the bladder, viz. by puncture from the rectum, by puncture above the pubes, and by opening the urethra behind the stricture. Of the method formerly recommended of puncturing by the perineum, I have no experience; but I shall here transcribe a passage from an author, for the purpose, in the first place, of correcting it, and in the next, of showing how the surgeon may penetrate the urethra behind the stricture, even without intending it, so capacious is the passage there.

" An old man, who for the last twelve or four-
" teen years of his life was subject to occasional
" difficulty, was at last affected with entire sup-
" pression, so that for five days preceding the
" operation, he had not passed one drop of urine.
" All attempts to introduce the catheter, or give
" relief by passing bougies were in vain; the tumid
" bladder was felt above the navel; he had con-
" tinual straining to void his urine, with sickness,
" thirst, and a feverish pulse. A young surgeon per-
" formed the operation of puncture in the perineum
" by all the usually prescribed rules. After dis-

"secting into the hollow of the pelvis, he struck his "trochar deep; but, upon withdrawing the stilette, "no urine flowed; it was only when he was with-"drawing the canula also that a little urine ran "out: nothing intimidated by this ill success, "he struck his trochar once more: now the urine "flowed freely. The canula was left in its place, "the urine continued to be discharged, but the "abdomen inflamed, and the man died. An "operation, essentially bad, was performed in a "manner so rude and barbarous, that a coroner's "inquest might have taken cognizance of the "affair. This culpable homicide," &c.

The operator was a young man of singular modesty and intelligence; he died early, much lamented. The patient's death was a consequence of the accumulation of urine for five days, and the rising of the bladder above the pubes. How long will the simple matter of fact be neglected, that a distended bladder, a bladder long irritated, is, of itself, sufficient to destroy life! I have a perfect recollection of this operation; the incision was made in the left side of the perineum, and the trochar struck upwards, no urine flowed on withdrawing the stilette; but in drawing the canula, the urine began to flow before the instrument was half withdrawn from the deep wound; the operator, therefore, wisely, instead of drawing out the canula altogether, thrust it inward, and was much comforted in seeing the urine flow in full stream from it.

On dissection, I saw the canula projecting into the cavity of the bladder; but on withdrawing the instrument altogether, no hole was to be discovered in the bladder, but only the natural opening of the urethra. The operator had transfixed the enlarged urethra with the trochar, so that on withdrawing the stilette, no urine could flow; but, in the act of withdrawing the canula, as soon as the extremity of it was disengaged from the opposite side of the urethra, the urine flowed into it; and when, on this, the canula was again pushed home, it passed along the urethra into the bladder. Here then was the operation of opening the posterior part of the urethra, done by chance, when the surgeon intended to have punctured the body of the bladder. These things could not have happened, unless the urethra had been as I have described it, large enough to admit the thumb, behind the stricture, which is always the case when the obstruction has been of long standing.

REVIEW OF THESE METHODS OF PUNCTURING THE BLADDER.

It may be useful to offer a few words in conclusion, on this subject, of puncturing the bladder:

1. If a patient have a stricture of the urethra, which gives a fair prospect of being cured, provided only time were afforded; if, by any imprudence of the patient, or by the improper interference of the surgeon, the canal be obstructed, and the bladder distended, we may look forward to

puncturing the bladder. But before having recourse to this (which is never to be done on light occasions;) we have much to attempt, in order to relieve the inflammation of the neck of the bladder, and to relieve the spasm of the muscles of the urethra, which have always a great share in the obstruction. We must endeavour to draw off the urine by the proper use of the bougie or the catheter. But all failing, the bladder being more distended, so that each hour the probability of relief is diminished, the bladder is to be punctured from the rectum, and the flexible catheter passed through the canula, and kept carefully in its place for three days. It is when the bladder is quite relieved, that the stricture is to be removed, and the cure accomplished.

2. And here I am forced to remark, that the operation of puncturing the bladder has a bad character, for the same reason that the operation for hernia, or for obstruction in the larynx has, viz. imprudent delay.

3. If a man have a stricture in the urethra, and the surrounding parts be indurated, so that there is no immediate hope of removing it by the caustic or the bougie; if, with this, there have occurred a sudden obstruction, and the bladder has risen, and has lost its action, and there remains no expectation of spontaneous relief, or of ease from lesser remedies, then I apprehend it is better to open the urethra in the perineum behind the stricture.

4. And this is to be immediately done, if the

symptoms indicate a rupture of the urethra, and effusion of urine.

5. This last consideration gives rise to another question of the greatest consequence in this department of practice, and one on which there is not any thing written, as far as I have observed. It is a very common occurrence, that the patient, who has a confirmed and obstinate stricture, shall have in consequence a harassing obstruction wearing him out, even although the retention be not in the last degree. The bladder is not in this case distended, but, on the contrary, the urine is sent off as quickly as it descends from the kidney. But this incessant stimulus and irritation are attended with fever and exhaustion, with such continued torture, and such incessant call to pass urine day and night, that the fever terminates in delirium, in effusion on his brain, or inflammation of his lungs: nay, without any particular determination, he is exhausted, and dies. This is the manner of death of by far the greater number of those who have died from disease of the urethra. Often, very often, the catastrophe is accelerated by improper interference, without restoring a free evacuation.

In this case it is difficult, if not impossible, to puncture the bladder from the rectum; it is impossible to do it above the pubes, for the bladder is not full; it does not perhaps contain an ounce of water! In such a case, I hold myself authorized to cut directly upon the stricture, and to open a

passage into the urethra behind it. By relieving the bladder from the necessity of violent and frequent action, the cause of the thickened coats is removed, they relax and permit the accumulation of urine more and more. Whether we are to attempt the further destruction of the stricture and the restoration of the natural course of urine just at this time, will depend on the strength and resolution of the patient. See further observations following the cases of *diseased prostate Gland.*

REPORT,

SHEWING, THAT ERRORS IN DIGESTION AND THE IRRITATION OF MATTER IN THE INTESTINAL CANAL, PRODUCE PAINS IN THE BLADDER AND URETHRA, WHICH ARE OFTEN MISTAKEN FOR THE SYMPTOMS OF STRICTURE, AND FOR STONE IN THE BLADDER.

AFTER such a detail of misery and long suffering from organic disease in these parts, as we have had in the last Report, it must be a relief to know, that our worst apprehensions from pain and spasm in the bladder and urethra, are very often occasioned by intestinal irritation, instead of stone or stricture. Mistakes about this matter continually occurring, and the distress of mind which they occasion, as well as the severe and hurtful practice which is too frequently the consequence, give it a strong claim upon our attention. At one time we find a patient living an indolent life, and thereby hurting his health, lest by a sudden motion he should displace a stone in his bladder; at another, irritation and strange feelings in the perineum lead the patient to believe that he has stricture. In the one case, the person is exhausted by the harass of this imaginary evil, and his health disturbed by the confinement and want of exercise. In the other case,

it is still worse, since the irritation in the urethra draws the patient to a surgeon; he introduces a bougie, and as this usually gives relief, it is repeated until some mischief is actually the consequence. Very often there is a slight abrasion of the membrane by the unskilful use of the bougie, which were it not for the frequent repetition, would soon heal; but by a perseverance in a wrong practice, it becomes the source of pain and discharge.

Mr. A. returned from Bengal in June. He complained of pain and irritation at the neck of the bladder, and discharge from the urethra, heat in making urine, and a frequent call to void it. He shewed me various bougies, and a catheter which he had been in the habit of using regularly since the time of his embarkation. And he further informed me, that the instrument was interrupted near what he supposed to be the neck of the bladder. On introducing one of his bougies, and in the manner in which he said he was in the habit of doing it, I found that it passed without obstruction along the whole of that part of the canal where stricture is usually found. But when [by calculation] the point had gone through the membranous part of the urethra, and was about to enter the neck of the bladder, it was entangled, and on pressing it forward it gave pain. I desisted that day, but on the succeeding one, taking a large wax bougie, and turning the point up, I passed it quite into the bladder. The extremity started over some obstruction; but when home

into the bladder it was not grasped, and the obstruction was not therefore of the nature of stricture.

This gentleman having originally the symptoms of stricture in the urethra, had been treated with the bougie, and a lodgment made betwixt the cords which are around the caput galinaginis, and hence arose a new source of uneasiness, and of inflammation and discharge. Such cases are very common, and very provoking, to witness. I had lately a young gentleman from the army of occupation, who had furnished his purse, obtained his leave, and engaged lodgings near me, and then presented himself to be cured, he said, of a confirmed stricture. He had long been exercising his ingenuity to destroy it, but finding that the symptoms did not abate, he came to town, resolved to sit down to a regular attack upon it. Somebody had given him a beginning, by hurting the membrane of the urethra, near the curve, with the end of the bougie, and he by successive injuries had prevented this breach healing. All that was required was to allow the parts rest, and to manage the bowels, which were the cause of the original irritation. I have never put my pen to write urethra cases, but some circumstances of this nature have been too curious to be forgotten, and these I shall now shortly narrate.

There is a certain class of patients, for which those surgeons who may not inaptly, however vulgarly, be said to have a run of business, find no time

or patience, their complaints are called imaginary. The surgeon is vexed with the obscurity of symptoms, and with a long history in strong language, expressive of that distress, which he cannot comprehend.

A patient came to me after being under the care of four surgeons successively, for the cure of stricture in the urethra. I found his chief complaint to be an excessive tenderness in the perineum, so that as he walked across the room he lifted his leg with an awkward and straddling gait, afraid to bring his thighs together. He told me that he had commanded a corps of yeomanry cavalry, had been an active magistrate, and a great fox-hunter; but that for a long time he had not been able to mount a horse. He had been obliged to have the seat of his carriage made with a hole answering to his perineum, and had taken every precaution to prevent pressure against that part. I introduced a bougie into the urethra, but found no obstruction, nor any unusual tenderness in the passage. I examined him also per anum. It was remarkable, that in putting him in the posture of lithotomy, and in fingering, kneading and pressing the perineum, he was not sensible to pain, although when he arose to walk, his progression was as before in the same singularly cautious manner, betraying the utmost anxiety, that not even the clothes should touch the perineum. I was by this, confirmed in my opinion, that it was a pain referable to the perineum, but not actually

seated there. By attention to the bowels, he was relieved, so as to resume his horse exercise, and venture into the country.

A professional gentleman suffered much uneasiness of mind, from a pain in the bladder, accompanied with frequent desire to make water, and an increase of pain on voiding it. He took alarm about stone in the bladder, because the pain was especially severe when the bladder was empty. In the commencement of the attack he suffered indescribable irritation extending over his whole body, and beginning at the lower part of the belly. It was with difficulty he could command his temper when in this state. These symptoms were particularly apt to come on when he lay down in bed; but he could not discover whether this was owing to the influence of the cold sheets upon his skin, to the change of posture, or the emptying of the bladder before going into bed. The first attack continued only during one day and night; but from time to time, these disagreeable symptoms returned; and during their continuance he found it quite impossible to dismiss uneasy reflections from his mind. At length the pain became more severe and continued, but happily at the same time he became convinced that the whole depended on the state of his bowels: For being urged to consider, if there were not something in his diet, which lodged and irritated the intestinal canal; his suspicion fell on a most preposterous indulgence in figs and Spanish white wine to supper, for several successive nights, By clearing out

the canal, and avoiding indigestible matters by the use of a mild laxative, the complaint entirely ceased. The singular circumstance here was the severity of the pain, apparently fixed and local, and the distinct sensation of tenderness in the neck of the bladder, although certainly there was no actual disease there.

I have frequently removed complaints falsely attributed to stricture, as well as the aggravation of the proper symptoms attending such obstruction, by dislodging scybalæ from the colon and rectum. There is an old patient of mine, who when distressed in this manner, with pain in making water, can ascertain, by his finger in ano, that it proceeds from hardened fæces there; and by a clyster of warm water and soap he removes the pain. To exhibit these symptoms in another point, I have prevailed on a patient to make his own statement: it is to the following effect:—

"The attack does not come on except when I am a little out of health, and when by confinement to the house, the bowels have become torpid. Though there be no pain before going to stool, still there is a certain sensation before sitting down, which warns me that I am to have an attack. It is after passing the fæces, that there is a sudden sensation of pain within the anus, and at the neck of the bladder. It is immediately followed by a pain, as of a sharp instrument driven from behind along the urethra, and giving the glans repeated darts. There follows

this an intolerable spasm; being an attempt to pass more urine. These symptoms are not relieved, until I bathe or foment all the parts thereabout with warm water. The attack not only returns on the occasion I have mentioned, but also frequently comes on when I am sitting in my chair; and even after I have been so well as to venture on horseback, it will come on suddenly, and with great violence. The principal distress then, is lancing pains along the urethra, with great irritation of the bladder.

"Considering this as inflammation of the bladder, I abstained from wine, until one day being in a large company, and suffering very severely, I, in despair, took a quantity of Port wine, which not only soothed me at this time, but made me much better the next day. After this I found myself always better on taking a few glasses of Port wine. Purges increase the irritation. The medicine which has done me the most service, is the balsam of copaiba, which acts as a gentle laxative. Though removed by attention to my bowels, the attack is very apt to return."

When thinking of this subject, I had a visit of an old patient who is occasionally disturbed in nearly the same manner. But in him were contrasted the disease actually seated in these parts, and the sympathetic affection from irritation of the intestinal canal. Some years ago, being in Ireland, he had a gonorrhea, and during the in-

flammatory stage his surgeon used a large bougie to remove the discharge. To this treatment he attributed an excess of suffering and inflammation in the neck of the bladder, which kept him long on his back. When he came over here, he still complained of pain in making water, and had a frequent desire to void it; and especially the pain was great in discharging the last drops of urine. On account of these symptoms, I was called in to sound him for the stone. He had very naturally great dread of this operation; for he thought it must occasion a return of all his sufferings. He was, on the contrary, relieved; no stone was felt. Next visit I examined the prostate, and found it enlarged on one side, and painful to the touch.*

For the removal of these symptoms, he took a pill of cicuta and calomel every night; every three days he had leeches applied to the verge of the anus, and rubbed upon the anterior part of the rectum an ointment with camphor and mercury; and as the bougie was found to relieve the distressing symptoms, it was introduced for ten minutes, twice a week. Under this treatment he got rapidly better, and the more formidable train of symptoms never returned. These complaints were indeed in contrast with others, in themselves sufficiently dis-

* For similar affections of the neck of the bladder, see the following Number.

tressing. There came upon him, from time to time, a pain at the lower part of his belly, and behind the pubes, attended with great irritation in his bladder, with spasms, and a stinging along the urethra. These I traced to irregularities of diet, and to the congestion of matter in his bowels. In conversation he observed "that abroad, we were not accustomed to sit after dinner as you do here, which if I am constrained to do, this irritation comes on; and if I ask a lady to drink wine, the wine is no sooner in my stomach, than the irritation of my bladder commences; and if I am long confined to the room, it rises to a dreadful degree of annoyance: but if I am free to leave the company, especially if I mount my horse, which I am in the habit of doing abroad, I prevent its occurrence, or am presently relieved, if it have begun." This gentleman was cured of these complaints by due attention to his bowels.

Such are among the most common occurrences in general practice. They are in themselves trifling complaints, but in their consequences very serious, from the mistakes into which they lead the surgeon; and the patient, in these circumstances, is always ready of belief.

In the preceding Report, I have affirmed, that there never occurs a proper stricture, posterior to the internal fascia of the perineum. (See plates of the succeeding No.) But the inflammation to which the parts behind are peculiarly exposed, very often gives rise to symptoms which are readily attributed to

stricture—these parts are the *Cowper's gland*, the *Sinus pocularis*, the *Prostate gland*, and the *Vesiculæ Seminales*. There are men whose hourly business is poking into this passage with bougies, who, if they have heard the names, know neither the place nor diseases of these parts, and sometimes, by forcing what they consider a stricture, they rupture the membrane, and enter their instrument into the substance of the prostate, or fix it in the sinus of the seminal caruncle.

Col. G. returned from India with health very much impaired, and with symptoms of what he thought stricture in the urethra. He went to a surgeon, who told him that he had only a very slight stricture, and that he would destroy it by one introduction of the bougie. He introduced a large wax bougie; it gave exquisite pain, and when withdrawn, it was doubled at the point; and the blood came out in jets from the end of the urethra. After this operation, the patient had no rest for many months. He went next to a surgeon who also treated him with bougies, under whom he was nearly two years.

When the time of his return to India drew near, he became excessively anxious, for still the introduction of the bougie was thought necessary, and every time it was introduced, with whatever degree of care, it drew blood. At this time I sounded him, and passed a large bougie along the whole urethra without giving him pain; but when the extremity of the instrument was sent through the prostate

gland, and over the seminal caruncle, there was an insufferable pain excited, and he became very faint. It was evident that he had no stricture. And, on further questioning him, as to the size of the bougie, and the marks which might have been upon it on former trials, he told me the bougies had always been brought out as easily as this last one, and without any mark upon them. As the bougies had always been brought out easily, and without being grasped, although it appeared that they had remained long in the passage, and as they had exhibited no nip nor mark of stricture, I could not resist the belief that there never had been a stricture, although he had been treated for it upwards of two years! I need not add, that I put this patient upon a very different plan. It was my object to soothe the complaint of the viscera, to which he was subject, to attend to the secretions from the intestines, and to see that they were in due quantity, for his liver was out of order. And in the mean time, to relieve the inflammation of the neck of the bladder from the injury it had suffered from the frequent and needless introduction of bougies.

By disturbance in the bowels a train of symptoms are produced, which are attributed to disease of the urethra. And it requires the patient to have a strong mind, or very implicit confidence in his surgeon, to be enabled to dismiss his apprehensions of stone or stricture.

How these sympathies take place, which give rise to these consequences, it is quite needless to attempt explaining, unless my reader had accompanied me in the demonstration of the visceral nerves. It is sufficient for practical purposes, at present, to observe, that there is not only a sympathy betwixt the bladder and the other parts contained within the pelvis, by which the diseases of the one may be mistaken for those of the other; but certain parts of the intestinal canal through its whole extent: sometimes the stomach, sometimes the ileon, often the colon, and still oftener the rectum, being the seat of irritation, will produce sensations in the bladder, the perineum, or urethra. And these will fill the mind of the sufferer with the most serious apprehensions, and lay him open to the mistakes of ignorance, or to what is worse.

What I have done in these cases is soon told—to enter fully into the subject, would be to usurp the physician's province.

The violent operation of purgatives is to be avoided. The combination of laxatives is better; thus, after emptying the canal, with the oleum ricini and tinctura sennæ, preserve the intestinal surface in activity by combinations of the ipecacuanha, pulvis rhei, and pulvis cretæ cum opio; or a combination of the pulvis antimonialis with the pulvis rhei, and the extractum papaveris albi; or, it may be, that it will suit better to give the electuarium sennæ with sulphur, or sharpened by the addition of jalap and oleum ricini. It may be

necessary to combine opium with the oleum ricini, when there is much pain and spasm, or to add the hyoscyamus to a pill of soap and extract of colocynth. Superior to all, in some constitutions, is a tea spoonful or two tea spoonfuls of the balsam of copaiba taken at night. When by such means the canal is disposed to a gentle action, let the morning evacuation be assisted by a large clyster of warm water. Very often, in these conditions of the viscera, there is only something wrong in the diet, and the symptoms will vanish, by avoiding what harbours and is offensive. As often, we shall find it impossible to restore to the bowels their healthy action, without stirring up the liver to its office; but this would carry us into another subject.

If mistakes have been committed with instruments, it will be well to apply leeches to the verge of the anus, and soothe by bathing and fomentations, by drinking mucilaginous decoctions, or taking occasionally of a mucilaginous electuary, or a tea spoonful of the Hoffman's Anodyne in almond emulsion.

Clysters of warm water, during the paroxysm, are very soothing, and go directly to the seat of the irritation. The clyster of cold water is often advantageous. The anodyne clyster of starch, or milk and tincture of opium, or the opiate suppository, will naturally be suggested in the violence of paroxysm. But a regulated diet, air and exercise are here, as in most complaints, the most natural, the most obvious, and the best means of cure.

REPORT

ON THE CURE OF WHITE SWELLING OF THE KNEE.

QUACKS even as well as surgeons, seem to have dropt the subject of white swelling of the knee. And the hospital practice exhibits the amputation knife in regular employment as the last resource. For although there may be some feeble debate, whether deep issues, blisters to the sides of the knee alternately, or a poultice of bread and water be best for the cure of this disease, it is evident, by the indifference of manner, that there is no sanguine hope attached to the one or the other method. And some will continue to allege, that a mild bitter with alkali, and attention to the bowels is of more use than any local application. Our latest author very freely acknowledges, that whatever may have been the origin of the inflammation of the membrane of the joint, yet when it proceeds to a certain degree, there is no difference of treatment, and in general, no remedy can be employed with any prospect of advantage, except the removal of the limb by amputation. This coming from a gentleman possessed of excellent abilities, the assistant in a hospital to the first surgeon of his time, and surrounded in the institution to which he is attached by intelligent and enterprizing surgeons, may of itself mark the general estimate

of success in these cases of scrofulous diseases of the joints.

This frequent recourse to amputation for diseases of the knee, and the despair so uniformly expressed in consultation on confirmed white swellings, have been with me, joined to some private circumstances, an incessant source of inquietude. It has led me to make trials of a new mode of treatment, which I shall here explain, lest it be further misunderstood than it has been already.

All the parts which enter into the structure of a joint, viz. the bone, cartilage, ligament, tendon, bursa, and capsular membrane have the same constitution. They have the same low degree of vascularity; their sensibility is of the same peculiar kind and degree; they are all prone to the same disease, scrofulous inflammation.

When inflamed, all these parts degenerate from their healthy appearance, and become incapable of their office. The tendons and ligaments lose their brightness, their compactness and strength. With the change of vascular action, they become soft and yielding; the bones are no longer sustained in proper union, and the joint is distorted or luxated.

But the Membrana Capsularis (which my pupils do not confound with the capsular ligament) is the most frequent seat of inflammation in the commencement of scrofulous disease, arising purely from constitution; although very often, the sprain, or injury of some particular ligament will begin the disease, and propagate it to the rest of the

complicated structure of the joint. We have an example of this in the sprain of the internal lateral ligament of the knee joint, or of the deltoid ligament of the ankle joint. The sinovia of the joint has been supposed to be secreted by a particular glandular apparatus; but the circumstance of the same fluid being secreted into the bursæ mucosæ where there is no fatty appendage, and only a sac similar to the capsular membrane, proves that the capsule is the secreting surface, and is therefore with much propriety called the sinovial membrane.

This secreting surface is very subject to the scrofulous inflammation, by which its appearance and texture are wholly changed. It becomes softer, duller in colour, and fleecy, which we ascertain by dissection; and by experience, we also know, that with these changes, it acquires an exquisite sensibility, and becomes the source of extensive mischief to the joint. Thus the sheaths of the tendons around the joint are inflamed, and the tendons adhere to them; thus suppuration takes place external to the joint, from the severity of the inflammation within. The tenderness, and the inflammation of the inner surface of the joint, continued and aggravated by the perpetual motion of the surfaces, are the sources of all the evil, both of the inflammation and suppuration without, and of the ulceration of the cartilages within.

There is a very familiar circumstance, and yet one not easily explained, which attends the inflammation of the membrane of the knee joint; I

mean the tension and rigidity of the hamstring tendons. There is no surer sign that we are failing in the treatment of the disease, than the increasing tension of these tendons; there is no better token of amendment than their relaxation.

Let us now consider in what manner a spontaneous cure takes place, when the scrofulous disease of the knee joint, has advanced so far as to destroy the fine texture of the surfaces. Either the inflammation produces adhesion, and obstructs the motion, or the bones are anchylosed, or there is at least some mechanical obstruction offered to the motion of the joint by the form of the bones. When the motion of the joint is interrupted, a source of continual excitement is removed, and the inflammation subsides. Thus in the hip joint disease, the incessant motion incident to that joint, and the little power we have of controuling it, cause the continuance of the inflammation, until the neck of the bone becoming shorter, the trochanters touch the pelvis, and lock with it: or until the ligaments of the joint are so destroyed, that the head of the femur is permitted to leave the acetabulum. In either case, that is by the locking of the processes, and the interruption to the friction, or by the separation of the inflamed surfaces, the excitement ceases, and there is a subsidence of the inflammation.

In the treatment of the disease of the knee joint, we find nothing of so much advantage as a splint of tin, adapted to the thigh and leg, which

shall both prevent the motion of the joint, and the distortion of the bones. The distortion inward, is often the consequence of the patient using a crutch, from the manner in which he supports the foot by clicking it round the crutch when he stands. The tin splint will go a great way to procure anchylosis, as it is certain that while the motion continues, there can be no union of the surfaces.

If no such precaution be used in white swelling of the knee, the tibia will be retracted, and partially displaced; and then the distortion, and the wasting of the thigh and the leg will be, perhaps, the cause of losing the leg. For both the parents and the surgeon argue in this manner: "True it is that the child's knee does not now threaten his life, yet the pain still rises after short intervals, and he is subject to paroxysms of fever; and he is losing the time of his education. Besides being so lame, that he cannot apply to his studies, or his occupation, the leg is shrunk and contracted, and were it free of pain from this moment, it could never be so useful as a wooden leg —therefore it is best to amputate." Thus the decision finally depends on the circumstance of contraction. It is therefore obvious, of how much consequence it is to prevent it, by an apparatus applied behind the knee joint.

As it appears, that the whole mischief results from the inflammation of the capsular membrane —as, in fact, you cut off the limb, because this membrane is inflamed, ought not the possibility

of changing the action of the membrane to be first discussed? It is remarkable, that up to the present day, when there is such a degree of activity in the profession, and such talents engaged, that it should be the daily routine of surgeons to cut off legs, without making any attempt to cure the disease, by imitating the process of nature, in forming a stiff joint. There seem to me to be many allowable experiments, before a fine young man or girl is to be mutilated by amputation. That in attempting such things, I have not proceeded without the most serious conviction of their danger, I hope to make appear. My first idea, has been to raise a new action, by passing a seton directly through the diseased joint. In proposing this, I thought of the danger of high inflammation, such as I have seen to be the consequence of a penetrating wound of the knee joint.

A young man, a carpenter, struck the inside of the knee with the corner of his adze. The sharp point just entered the capsule, where it is reflected over the inner condyle. It was a very small, and apparently trifling wound, which he disregarded. Ten days after the accident, the violent inflammation came to its height. When I saw him, the wound had thrown out pale granulations; the whole joint was much swollen; the pain was beyond endurance. He lay upon his back, with the teeth grinding, the cheeks flushed, the eyes bloodshot, and the whole muscular system stiff with exertion from the agony. It was a degree of suffering not likely to be forgotten, and yet I

thought that I might pass a seton directly through the knee joint, in a case of white swelling, and avoid this extreme of inflammation.

In the first place, I had reason to think, that the joint was not so prone to the violence of inflammation, when it had previously undergone a diseased process. I had witnessed the bursting of the capsule of the knee joint, in a man who had before this, fractured the patella, and I had observed in this case, the consequent inflammation to be less, and to come on slowly, although it was necessary in the end, to amputate. But the necessity of the operation was more owing to the suppuration and caries, than to the violence of inflammation.

It also occurred to me, that the violence of symptoms following the puncture of the capsule, was owing mainly to the patient continuing to exercise the limb after the puncture. For I have seen similar accidents, where by enjoining absolute rest, the inflammation was altogether prevented.

Occupied with these views of this subject, I waited patiently for a just occasion, until a patient should present demanding amputation, as a relief from suffering, for I contemplated the possibility of the experiment hurrying on the necessity of that operation.

I take the following case from the Note Book of the dresser:—

Wm. Scott, ætat. 26, a bricklayer, has a diseased knee, with much surrounding swelling and pain. He attributes his present state to a

sprain about nine years ago. At one time, the pain being very severe, he went into St. Bartholomew's Hospital. Here he was cupped and repeatedly blistered; after this, he got an ointment to rub on the joint. While in the hospital, his health suffered much, and the disease of the knee increasing, it was resolved to amputate the limb. He resisted this decision, and preferred going into the country. While there, he received benefit from warm fomentation with herbs. Some time after this, issues were formed on the sides of the knee, and they were kept open for nine months. Considerably relieved, he undertook work, but fell and hurt the diseased knee. After this, he was five weeks an out-patient of this hospital. On being admitted into the house, an issue was opened upon the anterior part of the knee, and after thirteen weeks, he returned into the country. Continuing still to suffer while in the country, and being quite lame, and now despairing of a favourable termination, he has returned for the purpose of having his limb removed.

The young man's knee is swelled and puffy, and tender, the thigh and leg are considerably shrunk; there is not much contraction, or distortion, but the joint is weak, and unable to bear the slightest pressure. He is disturbed with painful spasms, which make the limb spring up from the bed, wakening him in the night, and these are frequent and painful in the day also. How much he suffers is plainly shown by his desire of losing the limb.

Here was the occasion I sought of passing a seton across the knee joint. I had a slender needle made, in length about twice the diameter of the knee. To this I attached a seton of six silk threads; I passed it under the tendon of the patella, and across the joint. It gave no pain but in pricking the skin. I saw the limb put in junks, before leaving the patient; I ordered eight leeches to be applied to the knee the same night, and impressed the patient with the necessity of keeping his bed, and not moving the limb in the least.

I was not without anxiety for ten days; I waited for the rising inflammation, but the parts remained tranquil; only a little fulness and tenderness of the joint about the third and fourth day marked the presence of the seton; there would have been more, had it been drawn along under the skin instead of through the joint. My colleague in my absence cut the end of the cord short, intending to withdraw the seton; but it was fixed in the knee, and could not be withdrawn. I moved the dressing and the cord often, as I passed through the ward; at last, desirous of its being withdrawn, I pulled until it broke off close to the wound, so that part of the cord remained in the joint; but it produced no mischief, the wounds readily healed.

Some time after this, I passed another and a larger seton directly across the same joint, entering the needle betwixt the condyle and the head of the tibia, and bringing it out at the opposite point; and from the ease with which it was car-

ried through, I must suppose that the needle passed anterior to the crucial ligament.

On the third day there was pain and swelling of the joint, attended with fever and headache. Leeches and the cold lotion were applied, and these symptoms subsided. This seton remained in the joint several weeks, the limb being all the time carefully extended, upon a splint placed behind the thigh and leg. There was happily such a want of symptoms after the first attack of inflammation, that the notes are very few. "Scott's condition is remarkably improved; formerly there was pain and an involuntary jumping of the leg, which distressed him very much. This symptom has quite left him. He expresses himself much relieved; he is ordered to rise and move about a little, but still to keep the splint upon the back of the knee." It was remarkable, that part of this longer seton also remained fixed in the joint. It resisted repeated tugging, and at length it rotted at the two orifices, and the ends broke off, leaving the middle part in the joint. The wounds notwithstanding closed, and neither pain nor starting recurred. The health was remarkably improved, and being able to walk with the help of a stick, he was discharged from the hospital. He preferred walking to his parish in the country, fearing that his knee might be injured, as it had once been by the motion of the coach. He proposed to walk ten miles a day.

On the 8th of January I performed a similar operation on the knee of a woman, 30 years of age,

and of a very delicate constitution. In this case the knee joint was much disfigured, the hamstring tendons were very rigid, the joint contracted, and the lower extremity of the femur stood prominent by the displacement of the tibia backwards. This patient had suffered much and long, as the state of the knee joint proved. She had been in the hospital formerly, and after a year's absence, she has returned, for the purpose of undergoing amputation.

In these circumstances I thought myself authorized to pass a seton through the knee joint, which I did in the same manner as formerly, and, if possible, the operation was attended with less pain. On this occasion I used all the former precautions; I ordered the application of leeches that evening, and required the limb to be kept steady by a splint and bandage. This splint was put upon the back of the knee, and the leg and thigh rolled; but so as to expose the knee, and to admit the application of leeches and the lotion.

In this patient, there occurred more constitutional affection than in the former. Wishing to prevent the threads fixing to the surface of the joint, as happened before, I moved them, by drawing one end about the fifth day, and after this there was more pain in the joint, accompanied with a smart attack of fever. It subsided on the application of leeches, and after a dose of Dover's powder. This 28th of February, she said to me, "You will not cut off my leg now, Sir, for I have neither pain, nor starting, nor fever." I loosened

the bandage and removed the splint; I found the tenderness of the knee gone, and the swelling subsided, and what I thought of more consequence to the recovery, the hamstring tendons were quite relaxed.

March 21. She is this day dismissed. She goes in great spirits, having no complaint; the knee is stiff.

These are facts which I have thought worthy of the attention of the profession; and as the subject will no doubt be prosecuted by others, I hope they will not rashly dismiss those precautions which I have thought necessary.

In these two cases the seton has had a different effect from what I expected. I thought to have seen a violent inflammation, not easily subdued, and followed by anchylosis. It has, in both instances, raised some considerable inflammation, and must, I think, have produced adhesion of the surfaces of the capsule to a great extent, if not through the whole surface. This has been followed by a very distinct subsiding of the inflammation, by the relaxation of the hamstring tendons, and the entire disappearance of the painful spasms; and, as it might be expected in these circumstances, the irritation on the constitution has ceased.

Some other points regarding the treatment of the diseases of the joints, I shall reserve till a future opportunity.

THE TANJORE MAHARAJA SERFOGI'S SARASWATI MAHAL.

OF THE AXIS OF THE PELVIS.

IT is some years since I have heard of the axis of the pelvis; nor have I in any late publication seen the slightest notice of it. By conversation with some of our best educated pupils, I am induced to think it a matter much overlooked in surgical education. One of our young gentlemen who was studying midwifery, gave me the explanation of his teacher. He said it was the line in which a cannibal would spit a human body! entering by the umbilicus, and passing out by the extremity of the os coccygis. I find the same idea, not so savagely expressed, in our new Cyclopœdia. It is there said to be a line drawn from the apex of the os coccygis to the umbilicus.

If we are to say that the axis of a vessel is that quiescent right line which passes through the centre of it, and is equally distant from all its sides; it is obvious there can be no such line drawn through the human pelvis, and the term ought to be the axis of the brim of the pelvis; then it would be correct to say, that it is a line drawn through the umbilicus, and passing equi-distant from the sacrum, the os pubis, and the ilia. But what is commonly meant by the axis of the pelvis, is a line answering to the centre of the child's head, in its descent through the female pelvis. A line

continued from the centre of the brim to the centre of the outlet, and equi-distant from all sides of the pelvis, and therefore necessarily semicircular. (See Plate 2.) In this application of the term axis of the pelvis, it becomes a very important subject; and not less so to the surgeon than to the accoucheur.

The term axis may be applicable in another sense, viz. the centre or axis of revolution of the pelvis itself. The pelvis changes its position with the posture of the body, and therefore, according to the manner in which we place a patient, will it be necessary to vary the application of instruments. That this is a circumstance not enough attended to, and that serious mistakes arise from the neglect of it, I am prepared to show.

In treating this subject, I shall call the line through the cavity of the true pelvis, the *line of axis through the pelvis*, and the fixed line in the motions of the pelvis, I shall call the *axis of the revolving pelvis*.

Let us first attend to the line carried through the cavity of the pelvis. We shall suppose that we are looking laterally upon the skeleton. (See Plate 2.) A line is to be drawn perpendicular to the brim of the pelvis. This line is to be continued through the pelvis at an equal distance from the sacrum and the os pubis. It necessarily forms a semicircular line; and if the lower extremity of the semicircular line be continued in a direction perpendicular to the plane of the lower

opening of the pelvis, it will form a right angle with the first straight line.

The intention of nature, if I may so express myself, in this form and position of the pelvis, is to accommodate it to the upright position of the human body—to support the contents of the pelvis upon the ossa pubis, and to prevent the line of gravitation falling directly through the outlet. In the delivery of the child through the woman's pelvis, this provision produces, necessarily, a degree of intricacy in that process.

But the practice of midwifery has certainly this advantage, that it is strictly referable to principle. And in this I am inclined to think it is before the other branches of our art; where, if it be admitted that principles are necessary, it is still with a tardy consent. The accoucheur knows that he must mark the progress of the child's head in labour along this ideal line of the axis through the pelvis, that is, a line equally distant from the joining of the bones of the pubes and the sacrum. He knows that if he calculate its descent by its progress upon the os pubis, he will be deceived; for while it has by this measurement only an inch and a half to move, it is still above the brim of the pelvis. If, on the other hand, he were to calculate the progress of the labour, by the descent of the head along the os sacrum, he would likewise be deceived, as its progress here, must be with a motion, as five to two of its progress on the os pubis.

It is by taking into calculation the form of the pelvis in conjunction with this line of the axis, that the accoucheur is able to ascertain the position of the head by the degree of its descent. For as the rotation of the child's head is a consequence of the surfaces of the pelvis opposed to its descent, so is there necessarily a correspondence betwixt the degree of its progress along the line of the axis, and the rotation which the child's head has made.

By attention to the axis of the pelvis, the accoucheur not only ascertains the progress of the labour and the position of the child's head, but he also is enabled to proportion, and adapt his instruments at the same time to the form of the pelvis and to that of the head. He learns by this means also, to direct his efforts for the delivery of the child, which ought always to be in the line of the axis. But let us dismiss this part of the subject, which I have touched upon, only as illustrative of what properly belongs to us.

Lithotomy cannot be performed safely without regard to the line of the axis. If in using the gorget the surgeon were to carry the point straight onward, he would be particularly apt to lose the direction of the staff, and plunge in betwixt the rectum and bladder. To avoid this, he has only to remember the axis, and move his instrument in the semicircular direction, carrying the cutting point upwards, while the handle is moved backward.

In using Frere Cosme's instrument, it is not to

be drawn directly out, but still with a relation to the axis, and following the semicircular line. In operating with a knife, it is of much consequence to remember this semicircular line, since, according to the position of the staff, will the incision into the bladder be longer or shorter. (See Lithotomy.)

The line of axis through the pelvis must be considered in the operation of puncturing the bladder. Supposing that we intend reaching the bladder from the rectum, the trochar must have the curve of the axis, else it will not pass safely; nor will the end of the canula remain free in the cavity of the bladder: it will press and irritate the coats. It is obvious too, that in introducing the instrument, it ought to be carried in the line of the axis, or instead of passing free into the cavity of the bladder, it may transfix the back part of the bladder.

The same principle holds good in puncturing the bladder from above. The point of the stilette should take a new direction after it has been introduced a certain length. Having perforated the bladder, it ought then to be directed downwards in the line of the axis, which, in the circumstances requiring the operation, is always the long diameter of the bladder.

I now beg my reader's attention to the *axis of the revolving pelvis;* to the manner in which the pelvis revolves upon the heads of the thigh bones,

and hence produces a change of the position of the contents of the pelvis. A thing not quite obvious, and yet very necessary to be attended to in operations upon the urinary passage. The following observation will be more readily comprehended by looking to the outlines on Plate III.

We are not made fully sensible of the great extent of the motion of the trunk on the heads of the thigh bones, until we make a section of the pelvis in the dead body, and then place the body in various positions. When it is in the position of standing, the line passing in the length of the symphisis pubis is inclining forward at an angle of 45. with the plane on which we stand. [See fig. 1. H. I.] If the body be reclined, and the palm of the hand, tied to the sole of the foot, which elevates the pelvis, and brings it into the position for lithotomy, it will be found that the pelvis revolves 45 degrees, and the line of the symphisis pubis becomes as far inclined backwards as it was formerly in a direction forward.

If we have to strike the bladder as in lithotomy, or to direct an instrument in the course of an obstructed urethra, it requires no argument to prove, that the precision with which these operations shall be performed, will depend upon the accuracy with which the position of the os pubis, and the bladder and urethra shall have been calculated.

To take an example; if we place a patient upright against the wall, to introduce the point of the

catheter into the bladder, the hand must be so far depressed, that the straight part of the catheter becomes horizontal; and the hand must be a little more or less depressed, according to the curve of the instrument. It is obvious, how the young surgeon, who has had his lessons on the dead body, lying horizontally, is deceived in this operation; and how he believes, that he has passed the catheter into the bladder, perhaps, concluding that there is no water in it, when he has not passed the point of the instrument beyond the prostate gland.

Let us observe how important this consideration is in the operation of lithotomy. By mistaking the position of the pelvis, there is a miscalculation of the place of the staff; and it has occurred, that the surgeon cutting into the groove of the staff, has let the end of the instrument start out, the point not being in the bladder!

How necessary it is to attend to the position of the pelvis, as it revolves on the heads of the thigh bones, during the introduction of bougies, will be apparent, I think, by the dissertation which precedes this; where I have given instances of obstruction from the prostate, which were mistaken for stricture. Indeed, I am sure, that owing to the miscalculation of the position of the os pubis, and the consequent mistake as to the length of the urethra, obstructions at the neck of the bladder, of a very different nature from stricture, are daily mistaken for them, and the patient put to great and needless suffering. I have a preparation, where by the use of caustic,

the operator made one inch progress into the substance of the prostate gland. And I have known an instance, where the bougie was passed through the rectum from the same mistake. Indeed, such occurrences are so frequent, that there is no accounting for them, but by supposing that the surgeons have forgotten that they are operating on a canal, the position of which varies by the revolving of the pelvis.

When we consider these principles, as exhibited in the outlines, Plate III. we see how the stone may vary its position with the change of posture. In the upright position of the body, when the os pubis inclines forward, [as H. I. fig. 1.] the stone rests upon the os pubis. To reach it with the end of the sound, the point of the instrument must be made to turn short round the arch of the ossa pubis. In doing this, we feel a rub on the concave part of the staff; but by drawing the instrument a little, and still more forcibly depressing the handle, the point at length strikes the stone, and dislodges it; after which it is easily felt by the other consultants.

But if we turn our attention to the position of the parts in fig. 2. and consider them in reference to the natural gravitation of the stone, we shall perceive how in sounding we may miss it, from another circumstance. For when the patient's posture is changed, and he is laid upon his back, the stone gravitates to the most remote part of the bladder. So that to touch it, requires a long sound

with only a slight curve, and if the instrument be much bent, it cannot reach it.

It is in this posterior part of the bladder, that the stone lies during the operation. So that when grasped in the forceps, it ought to be lifted up to the level of the wound in the neck of the bladder, before making the effort of extraction.

These are a few of the observations which fall as natural illustrations of this subject. I hope they will be sufficient to lead my Reader's attention to the *axis* of the pelvis; and remove that contracted notion, that because it somehow sounds as if it were connected with midwifery, it does not belong to the business of a surgeon.

SECOND REPORT ON HERNIA,

BEING THE SUBSTANCE OF A CLINICAL LECTURE ON THE HERNIARY SAC, ON THE EFFECT OF EFFUSION INTO THE SAC, AND ON THE PECULIARITIES OBSERVABLE IN THE SAC OF THE CONGENITAL HERNIA.

THE principles of surgery, as they relate to hernia, may be considered under three heads. 1. The state of the intestine included in the sac—and on this division of the subject there will be found some observations, p. 181, of the First Volume of these Reports. 2. The state of the peritoneal sac, a subject which may be well illustrated by the facts now before us. 3. The condition of the muscles and tendons of the abdomen, which is the cause of hernia; and which will be treated under a distinct head in a future Report.

In the remarks alluded to in the First Volume of these Reports, it is observed, that there is a very great difference in the appearance of the sacs of the femoral and the inguinal hernia. I have there shown, that, in femoral hernia, independent of the coverings which can with any truth be called fasciæ, the peritoneal sac is surrounded with a membrane in structure and form like it, and often mistaken for the true sac: that this membrane does not merely

cover the hernia, but surrounds it on all sides, and takes the exact shape of the tumour, so as to resemble a bottle. It is in that Report also stated, that the true peritoneal sac of the femoral hernia is apt to be mistaken for the intestine, and reduced along with it. Of this resemblance in the substance and colour of the peritoneal sac to the intestine, we have seen two remarkable instances this season.

In addition to the peculiarity in the appearance of the sac, I will now offer to you some remarks on the effusion which takes place into the sac, instances of which, most of you have seen lately in the femoral hernia. It is a subject which has been unaccountably neglected.

On the 13th of the present month (March), we had an opportunity of witnessing a very singular appearance of the coverings of the intestine.

At two o'clock of the morning of that day, I operated on Martha Raffles, a very old woman, and the hour may convince you that I thought the patient in the utmost danger. On exposing the sac of the hernia, it was, as usual, mistaken for the gut, by the younger pupils. On puncturing it, although there escaped a quantity of fluid, yet there was an appearance to countenance the belief that I had opened a portion of the gut. For there rolled out a number of soft folds, resembling somewhat the valvulæ conniventes. I was puzzled for a time, and when I saw what had occasioned this singular appearance, I was willing that those with

me should also confess their surprise. My colleagues were absent, and not one of the attendants could make a guess at what it was which presented. It proved to be coagulable lymph, exuded betwixt the intestine and the sac, into which a copious secretion of serum had been poured, so that I cannot better describe it than by saying it was anasarcous. If it had been probable that the omentum could have assumed such an appearance, we should have said it was that membrane. But it quite vanished under the pressure of the finger like a soap bubble, and the small firm knuckle of the strangulated intestine was then discovered.

There were some circumstances in the case which occurred in the *evening* of the 8th of Nov. This was a woman of 48 years of age. She had a rupture formerly, but had worn a truss, which kept it up till three o'clock of that day. A dose of jalap had been given to her before she was brought into the house. She had a stimulating clyster administered, and the usual attempts had been made to reduce the intestine. The tumour lay in the groin, and was reflected upwards, so as to cover the ring; and, being oblong, it stretched towards the labium, so that it had very much the appearance of the bubonocele: it was, however, a femoral hernia. The tumour was smooth, elastic, and had very little tension. It had not the fulness or firmness to indicate the necessity of operation. The taxis was again recommended; and

it seemed to be successful, and the operation was deferred. Next morning, notwithstanding the softness and even compressibility of the tumour, I thought the woman's safety was best secured by the operation.

The operation was performed in the usual manner, and what was chiefly remarkable, was the thinness of the fascia, which covered the tumour, and the very great quantity of serous fluid, which distended the sac, amounting to three ounces, while the knuckle of intestine was not much larger than a hazel nut. The very slightest touch of the knife was sufficient to let the gut slip up; yet, without the operation with the knife, it never could have been reduced. This patient did well.

And I remarked to you at that time, that there might be some reason to doubt the necessity of operating when the size and softness of the tumour were considered; yet, you saw, if we had delayed, this woman would have been lost.

You now perceive how important it is to distinguish a softness and compressibility of the tumour proceeding from effusion into the sac, from that which is occasioned by the flaccidity and emptiness of the gut.

In this instance, when the house surgeon felt the tumour yielding under his pressure, it was natural for him to believe that he was succeeding; for commonly it happens, that when the tumour subsides, by the flatus of the intestine escaping

through the stricture, we are about to succeed in reducing the gut itself. You perceive how you may be deceived, and think you are pushing up the gut, when you are only pressing out the fluid from the sac, and making room for a further descent of the gut.

In both these examples of femoral hernia, the size of the portion of the gut included was so small, that I believe the hernia would not have been distinguishable at all, but for the sac and its fluid contents; and I am inclined to think that the last patient miscalculated the time of the rupture occurring. I do not think she took alarm until the effusion of serum made the tumour more remarkable.

In the quantity of serum contained within the sac, you will perceive another reason for the difficulty we experience in reducing the gut without the operation with the knife. The pressure upon the tumour acts upon the gut through the medium of the surrounding fluid, and consequently, an equal pressure must be on all the circumference of the portion of the gut. Whilst, therefore, you think you are pressing with scientific precision, first downwards, and then upwards, you are doing no such thing; you are pressing the fluid which is around the gut, and therefore on the gut generally. Indeed, I have no doubt, that sometimes the fluid preserves the gut from injury during clumsy attempts at reduction.

I apprehend the source of this serum to be the surface of the incarcerated gut; and its quantity to be a mark of the threatening degree of the strangulation, since it must proceed from the difficulty with which the blood returns through the veins of the mesentery, tightly embraced in the stricture. When the gut is reduced, we sometimes find serum flowing from the cavity of the belly; it is then a sign of the general excitement which the intestines have suffered during the incarceration of a portion of them. To whatever source we attribute the serum contained in the sac, it appears just to conclude, that while it prevents the reduction of the incarcerated gut by the taxis, it is an additional reason for the operation by incision.

Since we are upon the subject of effusion into the sac, and the unusual appearance presenting on opening it, you ought to give a place in your note-book for the occurrence of the *30th of December*.

This is a poor old man of 70 years of age. Eight years ago, he found he had a rupture, and got a truss for it, which has kept it up during all the time until nine days ago, that it came down suddenly. He has not been able to replace it, nor has he had a stool since. The singultus is very frequent. Much has been attempted before he was brought here. The usual means have been tried to reduce the gut since he was brought in: but in these circumstances, and especially after

nine days obstruction of the bowels, I cannot permit much fingering of the parts. He is to be saved by the operation, if at all.

The place of the hernia is uncommon; it is under the fat of the pubes; the neck of the sac comes out direct, and has not followed the course of the spermatic cord. It is what is called Ventro-Inguinal Hernia.

Operation.

The first incision, and a little dissection of the cellular membrane, exposed a tumour, of the size and form of an egg. The veins were particularly large in the integuments, and bled so as to obscure the surface. On dissecting off several layers of cellular membrane, a fair sac was disclosed; upon opening which, we thought we had got a mass of omentum around the intestine. It certainly was very different from the usual appearance of the sac: it was, nevertheless, the proper sac. On opening it, which was done with some difficulty, from the fulness and tension, a little serum was forced out, discoloured, and evidently bloody. The director being introduced, and the sac fully opened, an unusual appearance still presented, for the sac was adhering at some points to the intestine, and where it was not in close contact, a dark coagulum of blood covered the surface of the intestine. I broke down the coagulum with my fingers, and separated the adhesions of the sac and intestine with the edge of the knife. I then cut

the stricture in the usual manner, introducing the bistoury upon the director, and raising it like a lever, so as to cut the stricture directly upwards. Still the gut could not be reduced, for either a more than usual degree of effusion had been thrown out into the interstices of the coats of the intestine, or a very thick and viscid matter was contained within them. The gut retained the bottle shape, and could not with safety be forced through the neck of the sac. The neck of the sac being more freely opened, and gentle and continued pressure having somewhat diminished the size of the intestine, it was reduced with great precaution.

Two pertinent questions were put to me after this operation. Whence was this unusual appearance of coagulated blood within the sac? and was it probable that an intestine which had suffered so much, would recover and perform its office of transmitting the contents of the canal? As to the first query, I was of opinion, that after adhesions were formed betwixt the gut and the peritoneum, that they were torn by the attempts made to reduce the gut; and that from the torn vessels the blood had been poured out: and yet it is possible, that by the tightness of the stricture, a bloody exudation might have been forced from the turgid veins. It was an appearance for which you should be prepared. The serum which was forced out on the first incision of the true sac, was not such serous exudation as we are accustomed

to see contained within the sac, but the serum pressed out from the coagulum of blood. With regard to the second question, I feared that a portion of the canal, so injured as this was, could not take upon it that succession of actions, on which the natural evacuation of the bowels must always depend. When I saw the firmness of the adhesions, the extravasation of blood, but most of all, the state of effusion and congestion in the coats of the gut, I had little hope of the patient surviving many days.

Next day I found him very ill, and he persisted in the belief that he could not survive the ensuing night. He died at four o'clock the succeeding morning.

In operating on these femoral herniæ, we shall find it necessary to separate the surrounding coats from the thin peritoneal sac pretty extensively. When this is done, and the neck of the sac cut, the membrane is so disconnected, and the source of its blood cut off, that we find it sloughing; and thereby keeping the wound very long open, and in a foul condition. I therefore think it will be advisable in future to look narrowly to the condition of the sac after the reduction of the intestine, and to cut away the loose portions.

I proposed to make some remarks on the three cases of congenital hernia, which have followed in quick succession, and I shall confine myself to the peculiarities of the sacs. You all know,

that the sac of the congenital hernia is peculiar in this: that it is a natural process of the peritoneum, and not as in other herniæ, a preternatural and forcible protrusion of that membrane. You know that the vaginal coat of the testicle is prevented closing by the presence of the intestine, and that this membrane is the sac of the hernia. It may be owing to this peculiarity, that the sac of the congenital hernia, is thinner, finer, and more transparent than that of the bubonocele or scrotal hernia. It is at least important to know that this is the case.

But this is not the only peculiarity of the congenital sac. It is even of more consequence to observe, that in all these three cases, the thickness of the neck of the sac, was in remarkable contrast with the transparency of the lower part of the same membrane. In the elegant work of Mr. Cooper, to which I have formerly had occasion to refer, it is said, that the thickening of the neck of the sac is an extremely rare occurrence; and that even where it exists, a very inconsiderable degree of pressure is sufficient to return the herniary contents by mere dilatation of the sac with the finger, without cutting it through, provided the surrounding parts have been properly divided. And in treating of the congenital hernia, the same author says, that the incision of the sac is not to be carried further upwards, than within an inch of the abdominal ring. He recommends, that the finger should be passed within the sac, and if the stricture be felt at the ring, the dilatation is to

be made by insinuating the knife betwixt the sac and the ring. But he continues, if the stricture be in the tunica vaginalis itself, at the orifice towards the abdomen, the knife must be introduced within it, and the strictured part cautiously divided. To those of you, who would indolently rest upon the authority of a name, rather than undertake the labour of looking and thinking, I must hold up the authority of Pott and Hey against the opinion here expressed.

But to those of you, who love investigation, and who require conviction to set your minds at ease, upon a point of practical importance, I must beg attention to what is before us, for there is not one of you, for whom I would not tremble, in seeing you attempt the operation, after the method described here. I have elsewhere, and long ago, done my utmost to prevent surgeons introducing their fingers into the neck of the sac, for the purpose of dilating it ; well assured that there is much danger in forcing the neck of the sac with the finger, and knowing that it is a common cause of the failure of the operation. Having this opinion fortified by the preparations before me, I am bound to speak the strongest language of advice to you.

Nor can I approve this manner of passing the bistoury through a great length of the neck of the sac, to cut the stricture at the inner ring. I see no advantage in keeping entire a great portion of the neck of the sac, when we are about to cut across the

same membrane, as it is passing into the abdomen.

In the neck of the sac of the congenital hernia, is the stricture which strangulates, and moreover it is a very sharp stricture, and very dangerous, consequently. The last of these cases sufficiently proves this dangerous character.

A young man was brought into the house with a strangulated scrotal hernia, which, from the history, seemed to be congenital; after some attempts by the house-surgeon, and the employment of the usual means of reduction, without success, he was put to bed. There, the young man himself continued the efforts to return the intestine, and at last succeeded; but lamentable to say, it was by forcing the gut against the neck of the sac, until it burst. Then to be sure it went up, but he died next day, and the contents of the intestinal canal were discovered, abroad, in the cavity of the abdomen. The neck of the sac exhibited a dense stricture, similar to what I am about to show you; and the portion of the intestine, which had been retained by it, was ulcerated through, and had burst. There are several preparations exhibiting a similar cause of death in my collection*.

In a former Report, it is shown that the intestine, in hernia, suffers in two ways, 1st. by strangulation and mortification, and 2dly, by ulceration against the sharp stricture, as an artery is ulcerated

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* See Operative Surgery, Vol. I. plates I. and VI.

by a ligature. It is the approach to this ulcerated state which makes the intestine so tender, and which imposes upon us the necessity of being very careful in reducing the intestine, either by the taxis, or after the operation with the knife.

On the —— of August, an example of the congenital hernia occurred. The tumour was large, the symptoms urgent, and the necessity of operating absolute. In this operation, we all perceived the peculiarity I have mentioned, the fulness and the thinness of the sac. The blood-vessels, on the sac, were larger than usual, and the colour of the intestine was seen through the membrane. On opening the sac, the intestine was found in the last degree of strangulation, and the stricture particularly tight. I had difficulty in introducing a common director, and felt here, in a particular manner, what I have done on many occasions, that our instruments were too clumsy for this delicate operation. I found the stricture to be a cord which passed across the inside of the neck of the sac, and when I cut it, the intestine was reduced. This young man died, and you have the opportunity of seeing the nick of the knife which disengaged the gut. (See plate IV. fig. 1.) Several tendinous filaments are seen formed by condensation of the cellular membrane of the neck of the sac, and one which runs obliquely, is seen to be divided, and it was all that required to be divided in the operation. I put into your hands, at the same time, a

small sac of a hernia (fig. 2.), where this change which takes place in the neck or orifice, is very apparent. This was the sac of what is called a Ventro-inguinal hernia, and you may observe that while the lower part of the sac is delicate, and almost transparent, the neck is thick, opaque, and dense, and from its sharpness and strength, capable of cutting into the soft intestine.

As we are considering the peculiarities of the congenital hernia, I shall here recal to your recollection the circumstances of another unfortunate case.

A young man, of 24 years of age, was brought into the hospital. It seems that while walking in Long Acre, he felt his rupture come down. This had often happened before. He went into an apothecaries' shop, and an attempt was made to reduce it. But they did not succeed, and therefore, they brought him in a coach to the hospital. He was bled, and put into the bath, and had repeated stimulating clysters. He informed us, that he remembered having this rupture at seven years of age. The tumour was of the size of his fist, when brought into the hospital; but it had suddenly increased to twice the size, during the violence of vomiting.

Consultation.—If the difficulty of reducing the intestine were great before, the little hope there was, is diminished by the coming down of the ad-

ditional portion. The great volume of the intestine has been considered, and it has been suggested to open the neck of the sac only, so as to give freedom by cutting the stricture, without exposing the whole mass.

In the *operation* it was observed that the sac was remarkably thin; that when opened, no serum escaped; that the moment the sac was cut, the distended intestine rolled out, and seven folds were counted! Such an occurrence makes the further stages of the operation hazardous and slow; it is a circumstance to be carefully avoided. The neck of the sac was very narrow; it required to be cut more than once. The flatulent distention of the bowels, both without and within the neck of the sac, made the exposure longer than usual, and the handling of the intestine more free than was to be desired.

The intestine, in this case, was not advanced to that degree of turgescence and disorganization, that should have led us to expect a fatal termination. But the patient was seized with a sharp pain across the abdomen, and under the umbilicus, attended with a pulse above a hundred, and rather full, for an affection of the bowels; next day his features were sharp, and the pulse very weak; he was sensible, and foresaw his death; he died at two o'clock of the day following the operation.

On examining the body, the portion of the canal which had been down in the herniary sac, was in

a high state of inflammation; the intestines, in nineteen hours from the operation, were glued together, and firmly adhering.

In the sudden and great increase of the volume of the tumour in this case, we have another proof of the thinness and elasticity of the sac in the congenital hernia; so that, although rapidly stretched to a great size, by the first descent of the intestine, it increased suddenly to double the size during the effort of vomiting. Here, too, the neck of the sac was the seat of the stricture; and the ligamentous filaments, which had formed on the neck of the peritoneal sac, required to be cut, to admit of the reduction of the intestine. Cases are useful, when they leave a conviction in the mind, that a different practice might be followed with advantage, on a recurrence of the same circumstances. Were a case, in all respects similar, to present again, I would expose the neck of the tumour, and dissect until the peritoneal sac appeared, then opening it with care, I would introduce the directory, and with the bistoury make way for the point of the little finger, and cut across the stricture in the sac. The pressure, necessary to the reduction of the intestine might be made by grasping the outside of the tumour, instead of handling the intestine. This also is recommended in my *Operative Surgery.*

I trust I have sufficiently impressed upon you the circumstance of the condensation of the peritoneum, into a ligamentous band, in the neck of the

herniary sac; and that especially, in the congenital hernia, although the greater part of the body of the sac be thinner than in the other species, yet the neck is the seat of dense filaments, which really form the stricture, when the intestine is strangulated. All that I have seen of this species of hernia, tends to make me more alarmed for the fate of the patient, when it is strangulated, since I have found the stricture sharper, and more apt to cut or ulcerate the intestine than in other cases. If you put the finger in the neck of the sac, no one will be able to discover what degree of violence you use; but remember that the finger, bored into the neck of the sac, will crush the intestine, already long confined and tender at that part; the consequence will not appear during the operation, yet the patient will be destroyed. If the precaution be necessary at all, it is especially applicable to the congenital hernia.

REMARKS

ON THE

OPERATION OF LITHOTOMY.

In which is shown the Superiority of the Operation with the Knife, in avoiding many Causes of Failure, in attaining the Object of the Operation with less Violence and Suffering, and therefore with less Danger.

SURGEONS who have settled into the comforts, such as they are, of private practice, will not see the necessity of agitating this question—which is the best mode of cutting for the stone? Through some difficulties, and a few errors, they have decided on this matter; and now, forgetting the slow progress of their own experience, they think the opinion of the professors and teachers must have been settled long ago. But they take too narrow a view of this matter. Were they to return to the schools, or to read what is written on the question, or attend in our hospitals, they would see the subject as I do, and conclude that there was nothing

determined nor likely to be so. Surgeons of experience change their manner of operating every day. Abroad, too, it is the same; we have M. Dupuytren inventing in Paris, in the year 1818, a new way of lithotomy, and M. Sanson proposing to cut into the bladder through the rectum. If we go into a cutler's shop, we have as many gorgets presented to us as there are men of note in the profession, and of all various shapes, and with ingenious contrivances, to make the operation quite safe. Then as to our written authorities, there is a puzzling circumstance. The surgeons whose success in the operation has been most remarkable, who might perhaps be able to explain how it is they operate so well, remain satisfied with our admiration, without thinking it a duty to explain any thing. On the other hand, those who have operated seldom, who have perhaps performed the operation once, take upon them to explain all the variety of occurrences in this most important operation; and if they have only cut upon a stone lodged in the perineum, they straitway invent a new mode of operating for the stone.

Above all, are gentlemen aware of the inference drawn from the frequent change of instruments used in their operations? shall we give them the privilege of saying, "For my part, I can operate with any thing," while they show a solicitude about the form of their knife or gorget, while at one time they operate with a bistoury,

and at another with the gorget? We should be pleased to see them play with the thing, and that knowledge rendered all instruments safe in their hands. But if they be not successful, if, upon the whole, the success of the operation has unquestionably diminished, to suppose them indifferent, were to accuse them of want of natural feeling, as well as of common sense.

I apprehend, therefore, it will be admitted—1. That the success of modern lithotomists is very far from being uniform—2. That our best surgeons are not uniform in their manner of operating—3. That the variety of instruments, gorgets, lithotomes, and bistouries, which are daily exhibited, declare, as distinctly as if volumes were written upon the subject, that there is a restless desire of making the operation more safe, very naturally arising from want of success.

Such is the proof I have to offer of want of uniformity in the manner of performing this operation, and such, therefore, is my apology for drawing my reader's attention to the subject; and, as we cannot presume to give the rule, we may, I hope with sufficient consistency, endeavour to explain the principles of this operation.

Can there be a subject of greater interest, while any thing remains undetermined—is there any thing more touching, than to see a patient in perfect health taking leave of his family, and by an effort of resolution, putting himself into your power, to be bound hand and foot, and laid upon a

table, to undergo an operation the most severe to which the human frame can be subjected. There is besides, in this operation, more than in any other, a degree of uncertainty. The size and number of the stones, their place, the state of the prostate gland, the thickness of the bladder, and the soundness of the coats, are circumstances inferred, not proved. The age and constitution of the patient, and the capacity of bearing the injury, have more to do with this operation than any other. These are objects of anxiety, after the surgeon, by study and practice, has acquired dexterity and self-possession, which enable him to dismiss all other alarms. For my own part, when about to perform this operation, I have the feeling of a man entering on an enterprise, and I like to have the conviction that circumstances impose it upon me, that it is a duty and no occasion of my seeking. To acknowledge this, is to express my fears; and yet, when engaged in the operation, I have not experienced difficulty, nor can foresee any that may not be provided against.

There is a preliminary question, which must come home to every surgeon—How far are we to be permitted to reject a case that offers, lest the chain of successful operations be broken; to what length are we to go in refusing to operate, when the patient desires our aid, and when, upon refusal, he will fall into other hands? Before we are to judge of the success of an operator by the number of his successful cases, it ought to be in-

quired, what is his rule upon this head? If he have it in his power to select his cases, and to throw up those which are unfavourable, the unbroken series of his successful operations ought not to be taken as the fair average of success. We operate for hernia, in the most desperate cases, without regard to our own reputation; why should there be a different rule in the operation of lithotomy? It is a subject of regret that the character of the operation should be injured in our hands, but a more imperious duty commands us to do all.

In November 1815 my opinion was requested by the Physicians of the Hospital on a distressing case of irritation of the bladder. The patient was 36 years of age; his countenance indicated great suffering; he was sick, often vomited; the urine dropped away continually. He was subject to cold shivering, and at night his suffering was continual. He had besides something very particular in his manner, for there was a degree of incoherence, through which there broke a certain facetiousness that forced a smile in witnessing the greatest suffering. I sounded him, and found the bladder occupied by a large rough stone. My reader must believe that every attempt was made to soothe him, and relieve the irritability, by bleeding, by the warm bath, by mucilaginous decoctions, by opiates, by enemata, and suppositories. His sufferings continued, and were purely to be attributed to the presence of the stone.

The question was, therefore, narrowed; were the circumstances and the time such as authorized the operation? The opinion prevailed, that the patient was dying of the irritation from the presence of the stone. The patient entreated to have the stone extracted at all hazards. I operated, and broke the chain of my favourable cases. The man bore the operation well, if we were to take his resolution and his cheerful expressions as the test. But he was shivering, and vomited green matter before the operation, and after it, the same irritability of the stomach continued. I never saw the stomach so much affected with so little depression of spirits, for his jokes continued after the operation, as before. He continued bringing up mouthfuls of dark fluid till the end of the third day, when he died.

The stone being replaced in the bladder, after death, exactly filled it. The coats of the bladder were thickened, and the inner surface was rough with ulceration, from contact with the stone.

I must leave it to my reader to determine whether in these circumstances I ought to have operated. The patient was in torture; he must have died; and I operated as I would do in a desperate case of hernia. Nor do I think that the event in such circumstances ought to be counted as a failure of the operation, since we must attribute his death to the state of the parts previous to the operation; to the injury of the bladder, by the long contact of the large rough stone. But wha-

ther or not I was right in operating in these circumstances, the statement is necessary, to show the effect of delay. In witnessing the great suffering of the patient in the later stage of the disease, and the unfavourable state for operation into which he falls by delay, we have a motive for urging early operation. We see the suffering of the patient so aggravated towards the end, that he demands the operation in circumstances that make it more than doubtful in its issue. The stone is then large, the bladder thickened, the prostate tumid, and the health ruined. On the other hand, when the health is yet unimpaired, and the stone small, the danger of failure is reduced almost to nothing, and very much overbalanced by the pain and confinement.

Fifteen years ago I operated for stone with the knife, and all I have seen since of the operation with the gorget, and the experience I have had with the knife, induce me to take this opportunity of recommending the latter instrument. And I am the more induced to do so, by seeing that the comparison is not fairly made betwixt the operation with the knife and with the gorget. It has been represented as if the only question regarded the form of the instrument, whereas it embraces the whole manner of performing the operation. The question amounts to this—are we to make no advantage of our knowledge of the parts, but put our trust in the accuracy with which the cutler

adapts one instrument to another? Shall we perform an operation in which to fail in any one part leaves us no measure for retrieving the error; or one in which, through every stage, we are masters of the means, and can direct the operation according to exigencies?

An unlucky mistake is entertained, that the operation with the gorget is one of method and security, while that with the knife is bold, and adapted for display; nothing can be further from the just comparison of the two operations. With the gorget you proceed in a certain concerted movement, but without a possibility of feeling the state of the parts, or knowing exactly if you be right, until, trying to grasp the stone, you have it; or, if not, where are you? neither capable of judging how you fail to catch the stone, or, knowing it, capable of correcting yourself. In the operation with the knife there is no dash into the bladder, as with the gorget: you proceed by little and little, feeling your way, and careful to recognise every part of importance; measuring your incision by the freedom with which the fingers lie in the wound, and never going beyond the point of the finger with the edge of the knife.

I have proof of the slowness and caution with which the knife is to be used, and how little like a desire of eclat there is, in the manner of using it. The first time I operated, there was a gentleman behind me, Mr. Latta, the same who pub-

lished a System of Surgery: his voice was like the croak of a raven, and could not be lowered to a whisper; the forebodings of his mind were audible, and not a pleasant accompaniment. He so little expected an operation for the stone, without the click of the gorget, and the explosive entrance of it into the bladder, that the stone was extracted, while yet he lamented the delay of the first incision.

On a very late occasion, something of the same kind occurred; for an eminent surgeon being present, whose friendly offices I had not before enjoyed on a similar occasion, and he being, I presume, accustomed to see something like effect in this operation for the stone, interrupted me with inquiries—what can be the matter? *let me put in my finger!* When I had done, I was curious to know if I had been very tedious, and I thought myself justified, when, by my apprentice's watch, it appeared that I had extracted two stones in three minutes and a quarter; and this I say, to show that the first part of the operation is to be done slowly, and that there is nothing in the manner of it which can induce us to prefer it for the sake of displaying dexterity. In the last instance, the incisions must have occupied a great part of the whole time of the operation, to have authorized an interruption. In lithotomy the incision into the bladder, and the accurate adaptation of the wound to the stone, is the nicety, and ought to be performed slowly and with caution, that part of the operation

which with the gorget is performed as a coup de theatre.

Operation.

The apprentice, or pupil, stands beside you with a bason, in which a towel is laid, and betwixt the folds of the cloth are the instruments—the staff, a scalpel, a probe-pointed bistoury, and the forceps. The rest of the apparatus is at the end of the room. We hope that nothing more than I have named here, shall be wanting; yet it is our duty to have at hand every variety of instrument that can by any possibility be required.

The first Incision.

I place this title apart, to mark the folly of it. It is so in our books. But can there be any greater error than to impose the belief on the young surgeon, that he is to perform the first part of the operation in one incision! What man of sense, however great his experience or his dependence on his knowledge, would pretend to do all that ought now to be performed by a single cut? Let us admire the decision of Frere Jacques, as compared with the tedious and cruel methods of the Apparatus Major; but let it not be supposed a merit to do the first part of the operation quickly, nor with one incision. I know that this very idea is a fertile source of error; the surgeon thinking it not commendable to do this

part of the operation with caution, and by repeated touches of the knife, and yet fearing to do too much, he leaves it imperfect, and hurries to the application of the gorget; and thus there is left to be performed by that instrument more than can be well accomplished by it.

Late writers have improved on the extravagance of Mr. John Bell's description of the first incision. That author tells us to begin the incision an inch above the anus, and continue it betwixt three and four inches downwards. Let my reader turn to the blank leaf here, and draw a circle for the anus, and then apply a scale of inches, and draw a line from an inch above the anus three inches and a half below it. What, I may say, does he think of the incision? If we take the extraordinary merit of the work alluded to, we shall not be apt to criticize severely a manner of writing. When that author says he has made an incision of three feet upon a man's hip, we must not be led away by the consideration of the immensity of that man's hips, nor enter upon a calculation of his breadth and stature: we must only understand that the incision was very, very long! So, when the same author tells us he continues the incision two inches and a half past the anus, he means only an incision much longer and lower than they were wont to make at the time, when all the surgeons of Great Britain were operating with Mr. Benjamin Bell's System of Sur-

gery before them. In this same work, THE PRINCIPLES OF SURGERY, there is a drawing representing the first incision, (and surely such nates and such a cut never presented to the eyes of a lithotomist) and on it is marked out "the first stroke of the knife three inches and a half in length, more or less." There is a manner of writing, as there is of drawing—a caricature, which reconciles us, because it carries its apology with it in the spirit of execution. But when such passages are transcribed and incorporated, as this has been, into descriptions in sober earnest, they may do great mischief. I might criticize such works, but would it be fair to object to that in them which I should overlook in a brother?

I must accordingly notice another part of this description of the first incision; I mean, the distinction made betwixt cutting in the perineum, and cutting upon the hip! The author has that figure of eloquence which amplifies and exaggerates. I can compare this way of writing only to a vehemence in speaking. He thinks he must shake the student, and bawl in his ear, to awaken his attention: he tells them there is no way of making a sufficient opening for the extraction of the stone, but by cutting into the hip!! But the same author's excellent history of Frere Jacques explains this expression. At the time this extraordinary man appeared, the surgeons of Paris were in the practice of making a small incision directly upon the staff, and high upon the ante-

rior perineum. To announce how differently Frere Jacques made his incision, the witnesses of his performances said he struck his knife nearer the hip. We have a better book to consult than the work of M. Merry. When we look to the skeleton and the form of the bones, we see that cutting on the hip is utter nonsense; and we know, as Garengeot informs us, that the knife entered on the inside of the ischium. To speak of the hip as the place of incision, is to put the ideas of the pupils into absolute confusion; and here it may be as well to repeat, from the same authority, that one half of Frere Jacques's patients, cut in this way, died of bleeding from the common pudic artery.

The first incision, as it is termed, has two distinct objects—1. to permit the extraction of the stone—2. to allow the urine to drain freely off, during the confinement of the patient to bed, that there may be no depot of urine and pus in the cellular membrane of the pelvis.

The incision is made in the left side of the perineum. When we look to the arch of the bones of the pubes, in the skeleton, we are convinced that it will be quite useless to begin the incision higher than the arch of the bones; for as the bones must limit the wound upwards, as far as it affects the extraction of the stone, by beginning high, we only deceive ourselves, and think that

we have made an incision long enough, when in reality we have not. All that part of the outer cut which is above the arch of the bone, being useless, by the intervention of the bone, what remains below is too confined. Let the knife enter by the left side of the bulb, and under the arch of the bone: let it be carried down by the side of the anus, and pass the anus one inch. This will be sufficient for the extraction of the largest stone, and long enough, and consequently low enough, for draining off the urine.

While these papers were before me, I wished to ascertain this point exactly; thinking that writers have sometimes disagreed by trusting to their recollection. I therefore made the most accurate observation of the place of the wound, and its relation to the position of the patient in bed. This I did in a patient whom I had cut eleven days before. The urine had that day returned to the natural passage, which I thought a proof of the incision being proper. Having taken the outline of the hips, and marked very accurately the relation of the incision, both to the convexity of the hip and the opening into the bladder, I was convinced that, as the patient lay in bed, the posterior extremity of the incision fell considerably behind the line, perpendicular from the cut into the bladder: in other words, that the mouth of the wound was exactly under the opening into the bladder, and at the posterior part a little behind

it; and therefore perfectly adapted to drain off the urine, and prevent it sinking into the cellular membrane by the side of the rectum.

In what manner is this incision to be made? —Having once consulted the author above quoted, I cannot get the singularity of his description out of my head. "By spreading the fingers of the left-hand on the perineum, in the posture of displaying a ring," a manner that must be intelligible to every gentleman, "by holding the knife in the right-hand lightly, like a writing pen, with the point of the thumb and the three fingers, he begins his incision."

Friendly reader, wo betide you, if, in commencing this operation, you require to be told how to hold your knife. Hold it as you have been accustomed to do in dissecting these parts. Do not, at such a time as this, be thinking of your manner of holding your knife (and never mind the ring), but mark well the place of entering the knife. Let it be just under the arch of the bone, and in the angle betwixt the bulb and the left crus penis; consider the depth of the parts; mark the length to which the knife is to be *thrust*; and this will be more or less, depending upon the size of the man and the thickness of the fat. We shall say, that the knife is to be struck in perpendicular to the surface, to the depth of one full inch. The edge of the knife is then to be carried slowly downwards, betwixt the anus and

the tuber ischii: and whilst you thus draw the knife downwards, at the same time draw it towards you; that is, draw the point of the knife from the depth of the wound. For to carry the knife with the point ranging to the same depth, through all the extent of the incision, would be to hazard cutting the rectum. Let the lower extremity of the incision terminate one inch below the anus, and let it be made at the lower part, in a very slight degree semicircular.

The incision, so far as it is now made, is deep under the pubes, (and there it reaches to the staff) but towards the lower end it penetrates less and less; so that betwixt the anus and the ischium, it is little more than through the skin. When I see a surgeon cutting with the face of the knife upon the perineum, instead of using it thus dagger-ways, so as to strike deep, I fancy that he has forgotten the thickness of parts. Cutting to the depth of the diameter of his scalpel, is making no incision as to the object of getting into this deep space of the perineum, or of reaching the face of the prostate gland.

When the surgeon has entered his knife and drawn it downwards and towards him, as I have just described, the next part of the operation is to undertake a nice dissection, carrying the edge of the knife still in the same direction, but passing in the fore-finger of the left-hand, to press down the soft and yielding parts, especially the rectum; and when a cord-like stricture is felt, by

the finger pressed into the lower part of the incision, there touch with the edge of the knife; and this is to be done repeatedly, until all the fingers of the left-hand can be inserted into the wound up to the second joint. And when the fingers are held straight and close together, they represent the different depths of the wound in as far as the fore and middle fingers will penetrate deeper than the ring and little fingers. So ought the wound to be deep near the pubes, and less so towards the lower part.

The lower part of the wound being free, and calculated to permit us to pull the forceps in a direction downwards, and also to permit the urine to drain, we turn our attention to the upper and inner part of the incision. *And now*, turning up the face of the knife, cut towards the fore part of the prostate gland, directed to it by feeling the staff in the urethra. Carry the knife by the side of the staff, but do not yet cut into the groove.

OF THE STAFF.

I am now desirous of turning my reader's attention to the form of the staff, and the manner of using it. I must first offer a few observations on the instrument itself. The staff is made too small: it ought fully to dilate, and occupy the urethra. The groove should be wide, and deep. The staffs in the shops are small, with a trifling groove, adapted for the beak of the gorget, by

which surgeons have contrived to make a simple matter difficult. The consequence of the staff being made small, is that the membrane of the urethra rolls upon it, and is cut with difficulty; and when the cut is made, the sides of it do not expand, to display the wound; the membrane closes again, and a second and a third wound must be attempted. Who has seen much of the operation with the gorget, and has not seen the frequent repetition of incisions into the groove of the staff, and the frequent attempts to lodge the beak of the gorget in the groove of the staff? When we have a staff as large as the largest catheter, and the groove deep and broad, it makes this part of the operation easy: the membrane over the groove is easily struck, and when this is done, the wound opens, and is easily found again, if it should appear necessary to withdraw the knife before completing the incision into the bladder.

The groove of the staff should not be carried fully to the extremity of the instrument; and this is to prevent the possibility of the assistant, who holds the staff, pushing out the end of the instrument through the incision into the membranous part of the urethra. This has happened in consequence of the assistant not having kept the extremity of the instrument lodged in the bladder.

I have also had the groove made on the lower part of the staff. For experience, in operating with the lateral groove, taught me the inconve-

nience of it. By the assistant holding the staff close up to the arch of the pubes, I could not get the point of my knife into the groove; I was obliged to take the staff into my left-hand, and turn the handle towards the left groin of the patient. To permit the incision to be made laterally into the neck of the bladder, it is necessary to have that edge of the groove of the staff which is towards the patient's left side, cut down a little, so as to permit the knife to be lodged in the groove, and yet carried horizontally*.

When the staff is introduced, it is customary to let the attending surgeon feel the stone. This ceremony performed, the patient is put in position, and the surgeon is to feel the stone; and he places the staff upon it, or beneath it, as it may happen. But now is the time to judge of the exact position of the stone, in relation to the staff, and the assistant is to keep the staff exactly as the surgeon has placed it, in contact with the stone, through all the first part of the operation, and until the surgeon touches the stone by following the direction of the staff in the bladder. And here let my reader who is interested in this subject, contrast the difference of the two methods of proceeding in this part of the operation. With what simplicity and how quickly is

* Any of the instrument-makers may have my staff to forge by, when a gentleman applies for it.

the operation performed, when the staff is fixed upon the stone, and when the bladder is cut without disturbing this relation of the stone and the staff; when the stone is readily felt, merely by introducing the finger along the staff. On the other hand, if the staff be withdrawn when the gorget is introduced, and the gorget withdrawn when the forceps are introduced, the stone is to be sought for, and then we see the surgeon groping about for the stone, opening and closing the blades of the forceps, and pushing them this way and that, as if in search for something in a large and empty pocket! All this time he is carrying the contracted bladder on the end of the forceps, instead of moving the instrument into different parts of the bladder.

This is the place to observe that the facility of cutting into the bladder will depend upon the manner in which the staff is held. If the assistant hold it close up to the pubes, the surgeon will be embarrassed: if he bear his weight upon it, the prostate will be pressed against the rectum, and the surgeon, in cutting into the bladder, will cut largely, and yet never find the incision open; for, as the incision is prolonged, the staff is still pressing downwards, and there is no space betwixt the instrument and the margin of the incision. It is, therefore, the assistant's duty to keep the staff steadily poised betwixt those two extremes. Much of the facility of doing the operation will depend upon the manner in which the staff is held.

Opening the Groove of the Staff, and cutting the Prostate Gland.

The outward incisions, or the first part of the operation, being thus performed, and the staff so far disclosed, that it can be distinctly felt just before the prostate gland—the point of the knife is pushed into the groove; and now the edge of the knife, being directed to the left side of the patient, the point is to be carried forward along the groove of the staff, while the hand is depressed. Having pushed the point of the knife an inch and a half along the deep groove of the staff, the point is to be kept steady there, resting in the groove; and the handle of the knife is to be moved laterally, raising the cutting edge of the knife from the staff, and using it like a lever, while the point is kept still in the groove. By this means, the prostate gland is split in the same direction exactly as in the operation with the gorget.

In doing this, the point of the fore-finger of the left-hand follows the motion of the knife, and when the incision is sufficient, the finger slips forward along the groove of the staff into the bladder. Here let the surgeon be careful that he fully divides the prostate gland; and if he feel any difficulty in making the wound free enough to permit the introduction of the finger into the bladder, let him lay down the scalpel, and take up

the probe-pointed bistoury. This he is to pass well onward in the groove of the staff, and again introducing the fore-finger of the left-hand, he is to raise the edge of the bistoury and complete the incision, extending it laterally; finally, the finger is pushed on betwixt the staff and the bistoury, and then the latter is to be withdrawn. I have observed that this is not a painful part of the operation.

There is one remark I have to offer on this part of the operation, and that attended to, I think it will be safely and easily performed. In passing in the finger into the incision of the prostate gland, let the operator take care that he does not push the bladder before him, instead of opening a passage into it. I have felt the danger of this, in operating on a child of five years old. Having done the operation with great ease on the adult, where the broader knife made way for my finger to follow, I thought of doing the same in the boy, forgetting that the parts and the knife were on a small scale; my finger, therefore, did not pass easily into the wound of the prostate, and I felt the possibility of committing a great error, by pushing the bladder before the finger, and separating the prostate and neck of the bladder from the pubes. It should be observed that the bladder is easily pushed off from the os pubis, owing to the looseness of the cellular membrane there. Indeed I am positive that this has happened in

the operation of lithotomy, and that the cavity thus formed betwixt the bladder and the bone has been mistaken for the cavity of the bladder. I witnessed an operation on a child, where the small gorget being used, the surgeon never reached the stone: yet there was certainly a cavity, for the surgeon's fingers were passed deep, and moved freely around. The child died, complaining of great pain in the lower part of the belly. On dissection, it appeared that the bladder had not been cut, but it was separated from the os pubis, and a sort of cavity was formed behind that bone, which I found in a state of suppuration. Had the staff been retained in its place, so desperate an accident could not have happened. The surgeon would have felt the staff, he would have been directed towards the neck of the bladder by it, and he would then have discovered that the neck of the bladder had not been cut: he would then have cut it, and would have extracted the stone.

To any one who considers the manner in which the prostate gland embraces the urethra, it will be evident that the incision will be carried through a lesser portion of it, if it be directed obliquely upward, than if it be directed obliquely downward. If the knife be directed upwards, the surgeon will find that he gets more directly into the bladder, than if he cuts in a direction laterally and downwards; for in the latter instance, he will cut through a greater breadth of the prostate.

Now the truth must out, violence, in some manner, must be done! and the question is to be determined whether you are to employ the finger, or the forceps and the stone. The staff being still in the bladder, the operator is to stretch and enlarge the wound with his fore-finger. If he find he cannot enlarge the opening to the degree he desires, he must take the assistance of the probe-pointed bistoury, and introducing it along the finger, he is to cut such fibres as resist, but still in a lateral direction. But when the prostate gland has been freely cut, and the fore-finger passes easily into the bladder, and the stone is felt with the point of the finger, the chief part of the operation is performed. It will depend upon the position of the patient whether the surgeon feels the stone or not in an adult body. The position should be such that the stone may gravitate towards the wound.

When the wound is thus free to the finger, the forceps will be easily introduced: but if there occur any difficulty, it is quite *regular* to pass, the blunt gorget into the wound, and to slip the forceps over it. This may be especially necessary when the coats of the bladder are thickened, and there is no space betwixt the stone and the coats of the bladder, for then it is difficult to get the forceps introduced, and still more difficult to pass a blade of the instrument on each side of the stone.

When the stone is laid hold of with the forceps, let the extraction be made by a very slow motion, and in a direction downward.

CONCLUSION.

We have entered into so many details, that the description of the operation must have the appearance of intricacy: but when all goes well, this is the course of things. 1. The staff is struck upon the stone, and made to rest in contact with it. 2. The point of the knife is struck into the left side of the perineum, just under the arch of the pubes; it is carried downwards by the side of the anus, and past it. 3. The fore-finger of the left-hand is put into the wound, and the rectum pressed down; and the muscles and the internal fascia cut across. 4. The edge of the knife is turned up, and the membranous part of the urethra and the face of the prostate gland exposed. 5. The point of the knife is pushed into the groove of the staff, and carried forward, and the prostate gland is opened by a lateral movement of the knife. 6. The fore-finger of the left-hand follows the knife. The edge of the knife is directed by the fore-finger, and enlarges the wound of

the bladder ; the knife is withdrawn, and the forefinger is thrust deeper, so as to touch the stone. 7. The forceps are introduced, and touch the stone.

END OF PART V.